The Pacific Coast Architect

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THE PACIFIC COAST ARCHITECT

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EDITORIAL.

Name to Adorn Building

The members of the Oregon chapter of the American Institute of Architects have agreed informally to follow the plan of placing their names on buildings of which they are particularly proud. This plan has been recommended by officers of the parent institute and is being indorsed by the chapters of the organization all over the country.

Often the public accepts a building without ever stopping to ask who contributed the design, the whole work being regarded as the work of associates. By placing picturesque or sober signatures on noteworthy buildings in the form of brass nameplates, the architects believe honor will be paid where it is earned and that an additional incentive will be given painstaking effort.

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French Staircase House

The "staircase apartment" erected at 26 Rue Vavin, on the left bank of the Seine, Paris, has aroused among architects considerable comment and discussion. The structure is seven stories in height, each story receding some feet from the story below it so that the entire front bears some resemblance to a huge staircase. The house stands in a crowded apartment section. The front of each story thus opens upon a terrace, constituting the roof of the apartment below it, enabling the occupants to be out in the open air as much as they wish without leaving their apartment.

On account of the additional light which reaches the street on which their novel building is situated, it has sunlight for almost one hour longer than the streets parallel to it. The apartment house is built of reinforced concrete in such a way that no floor has to support the weight of those above it. This is secured by pillars perpendicular to the street level, to which beams supporting each floor are attached. By employing this method, the architects claim to have provided something better than the usual type of apartment house construction at a smaller cost.

Architects Bury Axe at Banquet

Peace and harmony reign in the ranks of the San Francisco chapter of the American Institute of Architects, following a banquet given Tuesday evening, May 5th, in honor of the San Francisco Public Library competition jury, which met earlier in the day and organized by electing James D. Phelan chairman and Paul P. Cret, of Philadelphia, secretary. The other member is Cass Gilbert, a New York Architect.

The banquet served a double purpose, in that it took the form of a reunion and reconciliation within the chapter between the members and Frederick H. Meyer, John Reid, Jr., and John Galen Howard, consulting architects of the City of San Francisco, who were in controversy with the chapter over the Civic Center project.

The presence of the three members at the banquet last night was the result of an action taken several days ago by the Board of Directors of the San Francisco chapter in presenting a resolution expunging the whole matter from the record. The resolution was passed unanimously.

William Mooser, who was prominent in the fight a year ago, said: "The hatchet has been buried and everything is serene again in the chapter."

It was intimated that a sentiment to bridge the discord that followed the trial of Architects Meyer, Reid and Howard has existed ever since the affair happened.

The three reinstated members took an active part in the festivities that accompanied the banquet. George B. McDougall acted as toastmaster.

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Manufacturers Creating Demand for Their Product

When the Standard Oil Company first went to China it found its sales limited by the fact that most persons had no suitable lamps. So the company had a lamp made for the burning of kerosene which it sold to the Chinese for seven and a half cents apiece. In the first year 875,000 lamps were sold, and in the year following 2,000,000. With lamps to burn the oil and give good light the company's kerosene sales climbed like the flight of a balloon. This lamp has enabled the toiling Chinese to add several hours to his work day, has promoted the business of the company, and has carried light in a very real sense into the dark places of earth. Here we have an excellent example of the working of modern industry. It goes into the world looking for markets, and if it can not find them it makes them. Our railroads build into unpeopled territory, then bring in settlers, then carry out their produce. Factories produce a new food, then create a desire for it in divers alluring ways. You have no need for what we offer, says the up-to-date manufacturer. Very well, we'll furnish you with a need, and straightway proceeds to do so.

The Architect Saves You Money

By Louis C. Newhall, President Boston Architectural Club.

The architect, like Shapespeare's "Man," plays many parts in his profession. Yet the part he plays in the planning and erection of a building of any kind is an almost unknown quantity in the minds of business men and owners generally, whether this involves the expenditure of much or little money in the building of a small private house or the erection of an imposing business structure.

The province of the architect bears the same relation to the owner as that of a specialist in medicine to his patient. It is the architect's business to know all the conditions that the owner wants to meet in a house or building.

It is the architect's business to be so familiar with costs of labor and materials that he can, with a reasonable degree of accuracy, tell the intending builder the cost of the structure that is to be built. It goes without saying that a specialist in medicine will often save the cost of his fee to his patient by knowing exactly what to do, and so where an owner consults an architect who has had training and experience, he will pay for the cost of services and obtain a result proportionate thereto.

It has been a mistaken notion on the part of many people that the employment of an architect would necessarily increase the cost of a building. This is not so, because the trained architect, knowing his cost of labor and material, will so apportion this cost and so plan his building that he will save his commission to the owner by economical planning and designing, and at the same time produce the most economical building, at the least possible cost.

This is where the owner many times makes his mistake. The public at large do not realize that architecture is a precise profession; one that is based absolutely on experience in building matters, and that the trained architect can and does build economically and reasonably, and that he can obtain, with the use of the same amount of labor and materials that an untrained man would use, results far better than this same untrained man, under the same circumstances, and oftentimes at less cost.

Real estate owners, and men who develop property, think many times that they are economizing in obtaining mediocre ability and that by buying plans outright from builders they are saving on their investment. The result is quite to the contrary. After the development is completed, the buildings done, they find they do not have the investment value that some other building, or some other property has which has been carefully considered, not only from the standpoint of architecture, but from the standpoint of investment also.

Too often the real estate promoter cuts his nose off and never realizes that his property is not as attractive as some other, and does not yield the same proportionate profit. It has been demonstrated to many real estate promoters that the employment of the very best class of architects obtainable is really the wisest kind of an investment for them, and a real economy in the long run.

This is true, not only in designing, but in superintending of buildings, for the architect who is thoroughly trained should be of decided value to an owner in the carrying out of any building project. There are numberless instances during the progress of a building where an architect's advice, decision and initiative are of the utmost value and importance.

The Renaissance in Spain

The architects of California should feel a great interest in the architecture of Spain. No country approaches so nearly our climatic conditions. This, of course, applies especially to Southern California. Our clear blue skies, warm yellow sunshine and brilliant flowers present an opportunity for composition for which we should feel very grateful.

Glancing at the Spanish Renaissance as an impression, we are conscious primarily of the desire of the builders to shelter the occupants from the heat and light. This necessity produced the broad cornice and its transparent purple shadow which, when thrown on a delicate cream colored wall surface, produces a feeling of delicacy and charm which never fails to fascinate.

It was apparently with regret that these old Spanish architects penetrated the smooth, clean wall surfaces at all. It is certain that when a doorway was completed they had usually produced a finely modeled and highly interesting motif. A motif which never failed to draw the eye of the passerby to the natural doorway of the building, leaving no doubt in his mind that this was the only proper way to enter. Its larger detail could be interpreted from a considerable distance, the red tile of the roof, the flash of white wall and the ornamental doorway. You are drawn by these to a closer examination of the facade when the form of the rich brown carved brackets supporting the cornice can be followed.

The Spanish Patio or inner court, which has such a great influence over American domestic architecture, is accountable for some of the most charming work in our country. The Patio originally served as a semi-sheltered space where delicate flowers could be raised and where in the evenings the family might sit and enjoy the cooler breezes without exposure to them.

From an architectural, or more properly, as applied to the Spanish Renaissance, from a decorative standpoint, the development was largely accountable to the early influence of the Moors. These people were driven from Spain in 1492 but only after they had left a stamp of their characteristic sense of texture and color on most of the work of Southern Spain. This is exemplified most noticeably in Toledo, the Moorish capital, by the Saracenic features such as the horseshoe arch and the elaborate pierced stone tracery. Attention is called more particularly to the Jewish synagogue at Toledo, where the flowing patterns and intricate geometrical designs show a patience and ambition and striving for beauty which cannot fail to stir the admiration of all of us.

The curious early churches of the Spanish conquerors seem to have been executed by the aid of Moorish craftsmen. In speaking of cathedrals, it is interesting to compare Leon with Amiens, its French prototype, and it is difficult to prevent the admission that it surpasses the latter in many respects most noticeably perhaps in the expanse of fenestration and the tenuity of its supports.

Probably the period which marks the actual birth of the Spanish Renaissance should be fixed by the Estilo Mudjar (Casa de Pilalos) (House of Pilate). This marks the curious mixing of the Moorish and Christian architecture of Spain. With abundant cream-colored stone. a plentiful supply of iron ore, supplemented by a love of art and form, these beauty-loving people have produced what is undoubtedly the most picturesque and delightfully delicate inspiration for the architects of the world to profit by.

Their sense of scale and of values in architectural motif is not surpassed by that of any other people.

Over 5,000,000 Yards Concrete Placed in Panama Canal

The amounts of concrete laid in the major features of the Panama Canal and its auxiliary works up to March 1, 1914, are as follows:

Item—	Cubic Yds.
Gatun Locks	2,068,424
Miraflores Locks	1,506,563
Pedro Miguel Lock and Dam	929,232
Gatun Dam and Spillway	232,256
Miraflores Dam and Spillway	79,004
Pedro Miguel-Miraflores Duct Line	2,193
Central Division	1,271
Balboa terminals	69,996
Cristobal terminals	63,785
Hydroelectric station	14,323
Transmission line	6,939
Aids to navigation	*5,000
Relocated Panama railroad	63,123
Permanent buildings, Balboa	7,202
*Approximate.	
Total	5,053,311

Including the work on fortifications, the pontoon barge piers at Paraise, quartermaster's construction, municipal engineer, etc., the total concrete placed by the American canal forces is well above 5,000,000 cubic yards.

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Electrolytic Action on Structural Materials

By Charles T. Phillips, C. E.*

The subject of electrolysis should be of great interest to the architect and building owner. Very little has been written on the subject for the architectural or engineering publications, due, no doubt, to the little interest that has been given to the electrolytic deterioration of materials used in building construction.

It is a well-known fact that when two dissimilar metals are metallically connected and buried in damp earth, a current of electricity will flow from one metal to the other, and the metal from which the current flows will lose weight. This galvanic action between two dissimilar metals is one form of electrolysis and may be confined to a small or large area in a portion of a building superstructure or foundation where conditions are favorable for this action. In the lower sections of a city where buildings are located on made ground, the foundations of which may be below sea level, the presence of salt in the moist ground will form a favorable element for local galvanic currents or for electrolysis from stray electric railway currents.

Electrolysis from electric railway current is caused by the current leaving the rails on the single wire trolley system and passing into the earth, thence into pipes and into the metallic substructure of buildings. The electrolytes that are adjacent to the metal split up electro-chemically into non-corrosive elements and acid-forming radicals. Where the current enters the metallic structure, the non-corrosive radicals appear and produce corrosion.

Every electrical current must complete its circuit and, in the case of the single overhead trolley system, the current from the dynamos at the generating station is delivered to the trolley wire. From the trolley wire the current passes down the trolley pole on the car into the controlling apparatus and motors, and then into the rails. The rail serves as the return wire to the starting point or the dynamo. The electric railway companies usually use this system and the iron rails are intended to form the negative conductor or return portion of the electrical circuit. In actual practice much of the current leaves the rails and returns through the earth and along such buried metal conductors as may form a path of least resistance. The lead sheaths of telephone and power cables, water and gas mains and substructures of buildings thus form the path of the return circuit. Where stray currents flow from underground structures of iron it has been estimated from tests made that there will be a loss of twenty pounds of iron per year for every ampere of current flowing. For other metals the loss will be more or less, depending upon the kind of metal.

While it has been generally assumed that electrolysis is produced only by direct current and that there is no electrolysis from alternating current, a decision has been reached by prominent engineers who have made investigations, that there is electrolysis action from alternating current. It is much less in extent, however, for the same quantity of electricity than with direct current.

The corrosion of iron or steel buried in earth or in concrete may be due to galvanic action caused by the physical or chemical difference between adjacent points on the surface of the metal, to the presence of foreign substance in the soil or concrete such as coke, iron oxides, cinders, etc., which set up galvanic action, or it may be due to an electric current which is leaving the metal at the point of corrosion. While corrosion of iron by electric currents may be influenced by a variety of causes, the extent of the corrosion is to a large degree a function of the quantity of electricity that is discharged from a given surface.

The tendency of different kinds of iron to suffer damage from electrolysis has been the subject of a number of tests and experiments, and it has been found that there is no marked difference between irons and steel. Cast iron is possibly the least affected, while steel is the most susceptible to electrolytic corrosion. This may be due to the protecting coat of scale on the cast iron and that the cast iron has a tendency to corrode more uniformly than the steel, which seems to be attacked more often in spots.

When iron corrodes it is always with more or less irregularity. Pitting on the surface may be practically confined to various size areas on the surface of the iron and small pits on the surface may communicate with a large chamber below. Frequently a honeycombed effect is produced and particles of the iron will fall away from the original body.

The possibility of damage to concrete structures by electric currents has aroused considerable apprehension that great damage may be in progress due to this cause. A number of theories have been advanced to account for the deterioration of concrete where the presence of electric currents were noticed. The passage of an electric current will cause heat and it is thought that where the current density is high, it may produce cracking; or gas may be liberated within the concrete, developing sufficient pressure to crack the concrete. That the concrete undergoes a chemical or physical change whereby it becomes soft and fragile, due to the passage of an electric current, is another theory. Where iron is buried in the concrete, corrosion of the iron results in the production of insoluble compounds of iron, which form near the surface of the iron and occupy about 2.2 times as much space as the original iron from which they were formed, thus developing sufficient mechanical pressure to crack the concrete. Formations of deposits of iron compounds, chiefly hydrates, within the pores of the concrete and

*Pacific Building, San Francisco.

those on oxidation developed the force that may cause cracking. No injurious effect has been noticed where iron is buried in concrete and the current flows from the concrete to the iron. Tests on specimens of concrete with an iron anode imbedded and the concrete kept thoroughly wet showed that water was forced out around the iron, evidently due to the formation of gas which, on escaping, forced the water through the pores of the concrete. This water carried calcium hydrate in solution, and the surface of the concrete surrounding the iron became quite soft. The bond in this case between the iron and the concrete was reduced to about one-fifth of its original value. The current had no effect on the strength of the concrete remote from the iron, so it may be assumed, in as far as this test is considered, that the concrete is only damaged in close proximity to where a metal is imbedded in the concrete.

The presence of salt in concrete, either having been put there during construction or from contact with salt water in the earth, has a very marked effect upon the amount of damage that can be done.

Tests made in the laboratory may not be considered as representing what would take place in the earth under normal conditions, but they are very satisfactory for studying the laws of corrosion and to form a basis upon which further investigation can be made.

The plan adopted in some cities to prevent electrolytic deterioration is to avoid an earth return for the trolley current. Washington, D. C., and New York have a double underground trolley, both positive and negative conductors being insulated from the ground. Cleveland has a double overhead trolley and Chicago is endeavoring to solve this problem by minimizing stray currents.

While a great deal of good may be done to prevent electrolysis in building foundations and footings by proper construction, a great many attempts to apply a remedy have failed, due to a lack of knowledge of what constituted a remedy.

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The Quantity System of Estimating

A Paper Delivered Before the Technical Society of the Pacific Coast by G. Alexander Wright.*

The measurement and description of mechanics' work and the placing of money values against such description is not new. Occasionally, when discussing the quantity system, one hears it spoken of as a "new idea." But it is not new by any means. The practice, however, of making a fixed "quantity" of material and labor the "essence" of the contract, if not new, is certainly "modern."

Historically speaking, there were measures of quantity, areas and distances in very early times. Ezekiel, the prophet, speaks of a man with a line and a measuring rod in his hand. Someone has said it was just a twelve-foot rod, such, for example, as we might use today. Then in Zechariah, reference is made to the length and breadth being taken of Jerusalem.

That the Greek architects took their measurements and made up their estimates of costs is generally admitted. Vitruvius, in his Handbook of Architecture, written about the time of Augustus, mentions as one of the essential qualifications of an architect, that he must be a good arithmetician "to work out measurements and to estimate the cost of building." Indeed, in the case of public work in the city of Ephesus the architect was obliged to give a figure representing the cost of the work, which was retained by the chief magistrate, and honors were conferred upon the architect if, at the end of the job, this estimate of cost had not been exceeded. If, however, the cost materially exceeded the estimate, the architect had to make up the deficiency, and it is said it was a matter of regret to Vitruvius that there was no such provision in the Roman law. Then, again, among the Greeks it was customary upon public work to publish itemized detailed accounts of the actual cost of such works, as well as the architect's estimate. Payment by measurement was very common, and we find references to a type of engineer-architects who measured buildings and whose reports finally settled matters—a sort of arbitrator. Here it will be seen, therefore, that we have distinct references to the principle of "payment by measurement," the modern equivalent for which is the quantity system, whilst the Greek engineer-architect accords very closely to the quantity surveyor of today.

Enough has been said to show that the measuring (or we say "quantity") surveyor has existed, certainly from the time of the Greeks and Romans. The quantity system as we know it today had its origin some eighty years ago when competing bidders met and one of their number was selected to take off the quantities and furnish a copy to each of his competitors.

Better methods in time prevailed until the system was evolved such as I expect to see adopted in the United States, i. e., compensation to the contractor through definite measurement being made the basis of the contract.

Competition, so called, among contractors is comparatively a modern innovation. The words "so called" are used intentionally, for under the prevailing conditions, competition intelligently and conservatively conducted is the exception, and not the rule. Our methods today are largely gambling methods when it comes to ascertaining the quantities of materials which go to make up a structure and which must, of course, be accurately ascertained before an intelligent, satisfactory bid can be made. So true is this that it is a matter of common knowledge that fully fifty per cent of the contracts let are the result of error, and further, that the more capable and careful a bidder is to get in all his items, the less chance he has of securing a contract, profitable or even otherwise. The lowest bid, the one generally accepted, is usually anything but the most accurate.

One of the greatest inconsistencies also in competitive estimating lies in the fact that no sooner are bidders invited to give a price on a job than they seem to compete among themselves to see who can take off the least quantity of material, etc., and it is surprising how well some of them succeed.

The quantity system is not, as some persons have supposed, merely the taking off of a list of items by one person, for one other person's use, nor does it consist solely of the listing of items by individual contractors with varying methods and uncertain accuracy, owing in part to the fact that contractors are seldom if ever allowed proper time in which to make up an accurate bid. It must not be overlooked that some "training" is also essential to the accurate preparation and classification of quantities.

What the Quantity System does mean, however, is the careful measurement by an independent person specially trained in this special kind of work, and the present age is undoubtedly the age of the specialist. This specialist or quantity surveyor proceeds with his

*President of the Technical Society of the Pacific Coast.

work somewhat differently to the average contractor, for he follows certain recognized rules in taking off, abstracting and billing, with a view to eliminating error. He uses also certain uniform standards of measurements and expression. Every written word or figure is preserved for future reference. His checking and rechecking methods to insure accuracy must be studied to be appreciated by those to whom the Quantity System is unknown. A record is made of every item, however small, having a money value. These items are then all classified and arranged, each under its proper trade or department in methodical order. Guess-work methods are unknown to the quantity surveyor, whilst his accuracy and attention to details is well worthy of comment.

The surveyor who does this work is a professional man similar to the engineer and the architect. He should, in fact, have, and usually has had, some experience at least in the work of these professions, and in addition, a practical experience acquired in the field in actual superintendence of construction work.

Such a surveyor then upon commencing to take off quantity from an architect's or engineer's drawings, readily detects any ambiguities or discrepancies which exist, through hasty preparation or otherwise. Attention of the architect or engineer is at once called to such matters by the quantity surveyor, as he goes along. Being so detected, such ambiguities and uncertainties can be, and are, corrected and adjusted, so that by the time the drawings and specifications reach the bidders for estimating purposes, all doubts have been cleared up, and everything has been made so plain and accurate that the possibility of error in quantities can be practically disregarded.

This document, prepared exclusively in the surveyor's office, is then either printed or similarly reproduced, and a fac simile copy supplied free of cost to each bidder, who inserts his unit price opposite each item, and readily foots up the money cost in dollars and cents, and which really is all that he should be asked to do. The quantities of materials and labor then set forth in this document, or bill of quantities, represents the limit of what the contractor will be called upon to perform or furnish, in order to complete his contract. In short, the bid becomes a proposal to do a certain "fixed quantity" of work, indicated in the quantities, no more and no less. The contract to be drawn accordingly. This then very briefly is the main underlying principle of the Quantity System of Estimating, a definite quantity of work for a definite price, and payment according to a well defined systematized method of measurement, and the entire elimination of those well-known conditions and elements, which now compel bidders to take chances, and for which all parties usually suffer in the end, the owner included.

Most of us are familiar with these wasteful, unsatisfactory methods, and sometimes, even pernicious practices, which are followed today in bidding upon and carrying out work. These injure both parties to a contract, and they arise largely from bidders' mistakes in figuring, because accuracy has to be so often sacrificed for an ill-advised speed. A large proportion of these mistakes occur in the hurried figuring of the "quantities" by bidders. Some of us, when we have the opportunity of looking behind the scenes, so to speak, become appalled at the resultant effects of existing practices, such as the enormous waste in time and money in useless figuring, disputes, harassing conditions, hard feeling, lack of confidence, delays, suits at law, and so forth, nearly all of which may be avoided by adopting more conservative, modern methods in our preparatory work before contracts are let. Further, interpretation of plans and specifications should, in common fairness to both parties to the contract, be made wherever possible, before a contract is let, and not be left until afterwards, nor to be done "as directed." Under the Quantity System, where the quantities are made the basis of the contract, this becomes practically imperative. Regarding interpretations, one might be excused for saying that it would seem, as engineers or architects, to be a question of policy as well as fairness whether we should continue to even assume the responsibility of deciding things already contracted for, according to our "judgment." If our judgment is to govern what a contractor must do, would it not be better to consider those things which can be considered, and then determine them finally before a contract is let. Many an architect and engineer has suffered professionally through assuming to exercise judiciary powers unnecessarily, But, to return, notwithstanding the fact that over 40 per cent of the entire population of our cities are dependent directly or indirectly upon the construction of buildings, yet the methods generally followed to determine the important question of contract cost are those used generations ago; they come to us as a tradition from the period when tallow candles were used. Whilst we have made wonderful strides in constructive methods and materials, and, let us hope, in design, little or no attention has been given to standardizing estimating methods. We seem to have been too busy "speeding up" to regard seriously the advantages of accuracy when it comes to spending money on construction. In the end, of course, it is the owner, the financier, who suffers. There are, however, indications as a result of the movement initiated in San Francisco that more conservatism and a closer adherence to business principles are going to be preferred by the moneyed interests in place of the guesswork and gambling methods which they have overlooked in the past.

A contract, according to Blackstone, is "an agreement upon sufficient consideration to do, or not to do, a particular thing." The lowest bidder today will scarcely admit that the contract consideration is sufficient, or that his contract obligations are limited to do any one particular thing. It would also seem that architects or engineers who permit an unduly low bidder to sign up for a piece of work are courting trouble, and in such cases, where they have constituted themselves sole arbiters of the contract, their judicial powers, if exercised, is open to criticism.

The principle of measure and value, or payment by measurement, usually designated as the Quantity System, is based upon equity and square dealing. On large work it is used in Germany, France, Ireland, England, Australia, Scotland, and even in South Africa, where some thousand miles or more north of Cape Town we find not only an Institute of Architects, but an Institute of Quantity Surveyors, and it is a significant fact that in no instance where the system has been once established has it ever been abandoned for their former haphazard methods, and which corresponds with those we have employed for generations past and still use.

Among the advantages and improved methods of estimating afforded by the Quantity System may be mentioned: First, the enormous saving of time and money now wasted by numerous bidders all doing the same thing, going over the same ground. Second, safer bids will be made, as the volume of work to be

(Continued on page 159)

Washington State Building

The Washington State building to be erected at the Exposition grounds for the 1915 Exposition will serve to convince the visitor to the fair of the growing importance of Washington as a center of culture, art and industry; able to take her place amongst the most enterprising of her sister states; ideally located, backed by San Francisco Bay, and fronting a circular court formed by four State and foreign pavilions.

Architecturally the exterior will be of a modified classic or, to be more explicit, modernized Italian renaissance. Being in the midst of so many elaborate structures where the low cost of construction permits the profuse use of ornament on the exteriors, and where repetition is so apt to appear and tire the eye of the visitor, the Washington building will rely for its strength in simplicity of line and well studied proportions.

One enters the building and is at once impressed with the classic yet restful influence of the Doric lobby. The color scheme of gray and white lends itself admirably to the interior detail, which closely follows that of the exterior.

Above the lobby and at each pavilion end there will be large ceiling lights treated with art glass. The center panel over the lobby will be circular in shape, with a diameter of thirty feet over the entire well opening to the ground floor. This, with the aid of the large grilled windows of amber cathedral glass, will throw a restful, cool light over the entire center of the building.

On one end of the first floor a moving picture theater accommodating over three hundred people will be installed, where the agricultural and industrial progress of Washington will be filmed.

The other end of this floor will be used primarily for a few picked exhibits and will, like the central lobby, be open to the second story ceiling light.

Passing from the main lobby up the open stairway, where at any point an unobstructed view can be had of the first floor, one comes to the second floor, which with the exception of the social hall, is again all open. From this floor a view may be had of all the lower floor over the heavy balustrades of the well openings.

The cornice and columns of the lower floor and well openings will be in Washington woods. The columns of the second story will all be of plaster. All the woodwork will be treated with waxed silver gray stain to permit the grains of the woods to show.

The social hall and ladies' and men's parlors are located on the second floor, where the visitor will find entertainment. Rooms are provided for matrons, ladies' rest rooms, and every convenience necessary.

Skirting the lobby will be commissioners' offices, public telephone booths, information booths and a post-office.

The building is planned to be of interest to visitors from the world over and at the same time a home for Washingtonians. All features have been carefully considered and is, in the opinion of all, a structure typical of the enterprising State of Washington.

A. F. Heide, the architect of this pavilion, has had previous experience in the planning of state exposition buildings, having planned for the State of Washington its buildings at both the St. Louis and Portland expositions.

Mr. Heide is also preparing plans for the Washington building at San Diego, work on which will commence very shortly.

The Call-Post Building

The building is situated on one of the few so-termed island lots, namely, having a street frontage for each of the four facades, 264 feet on Jessie street and on Rose avenue and 68 feet on New Montgomery street and on Annie street, each of these two latter frontages having a prominent entrance to the office portion of the building, occupying the five upper floors.

The basement and two lower stories will be entirely occupied by the various newspaper departments, and fitted up expressly for that purpose. The pressroom, equipped at present for five presses and ample room for expansion, extends from the basement level up entirely through the first floor. The balance of the first story will be taken up by the business office and delivery departments, and the second story entirely devoted to the editorial and reporters' quarters, photo-engraving, etching, art and biographical departments, etc. The five floors above will contain two hundred and fifty large, well lighted, modern and fully equipped offices, all having street frontages communicating with the two main first-story entrances above mentioned, one on New Montgomery and the other on Annie street. These entrances, each consisting of a handsome two-story vestibule, communicate directly with passenger elevators, consisting of six high-speed electric machines, which elevators also communicate with the newspaper departments on second floor; with two special hydro-electric machines provided for those departments.

A special feature is made of the two main office entrances, being finished entirely in bronze and marble with a Caen stone treatment for walls and ceilings of the first story above the marble. The corridors in the various floors above are finished in a corresponding manner throughout; mahogany being used for the interior finish of offices.

The treatment of the exterior, as shown by the illustration, is in the Italian renaissance, in which the two end pavilions are emphasized by the fluted pilasters extending through three stories with Corinthian capitals supporting the entablature and main cornice at line of sixth floor. Above this the seventh story is given a lighter treatment surmounted by a secondary cornice and balustrade.

The two lower stories of the building consist of a series of rusticated pilasters filled in with plate glass and metal frames.

The third floor, acting as a base for the superstructure, is heavily rusticated with flat arched openings.

The color treatment of the exterior throughout will be in a gray stone with all carvings and enrichments of the same material.

The cost of the completed structure will run between $400,000 and $500,000.

Reid Bros., San Francisco, are the architects.

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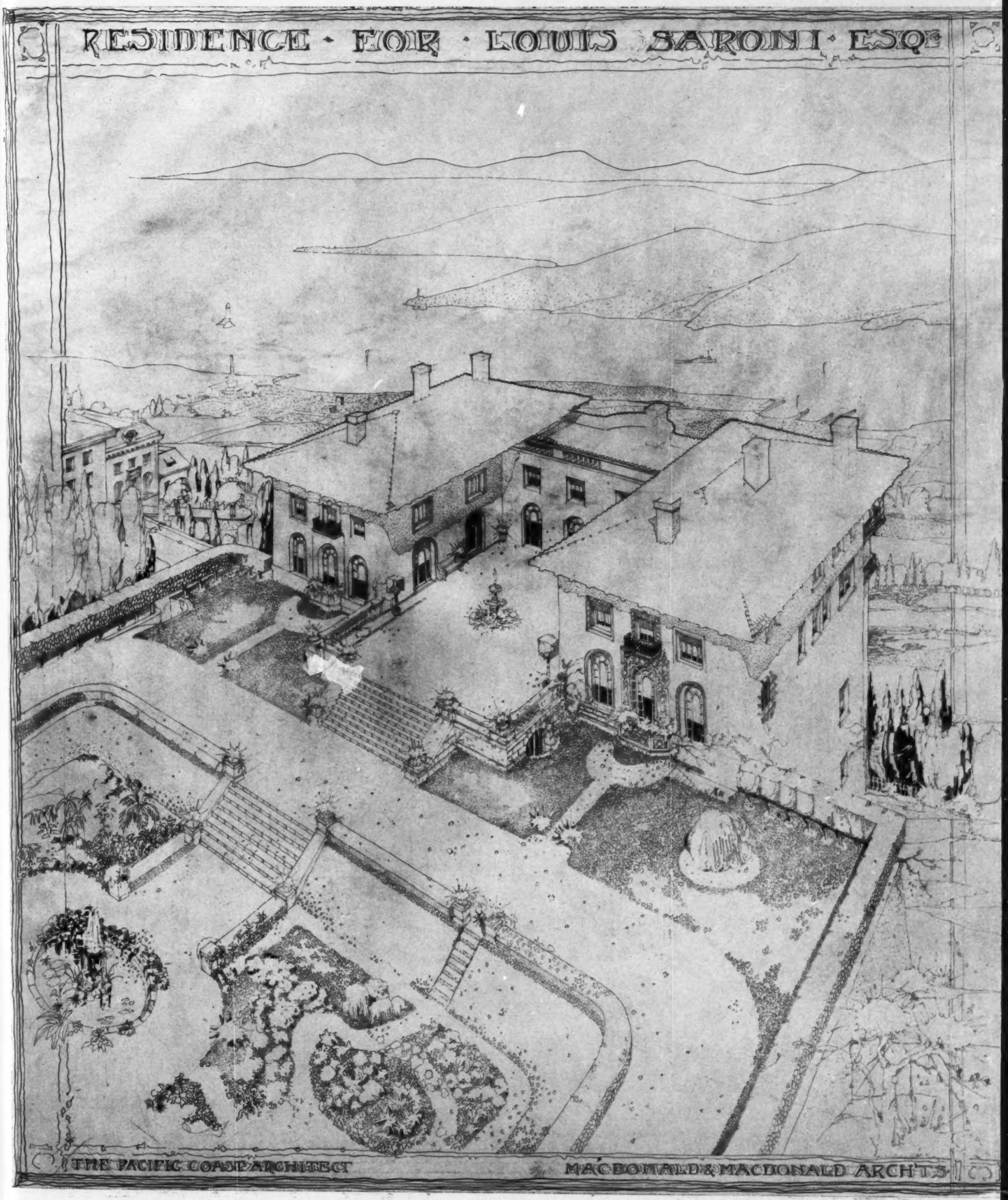
Careful Building Inspection

In the construction of the modern building there is positive need of rigid inspection. If time is taken to view carefully the work as erected, this necessity becomes at once apparent.

Where concrete work is used, too close watching cannot be had. The placing of the reinforcing steel should be accurate and the necessary amount of cement in no way reduced. There are many porous sections, especially in concrete walls, which do not measure up to a good standard and if a timid inspection is permitted concrete work falls far short of the calculations of the strength it is supposed to have.

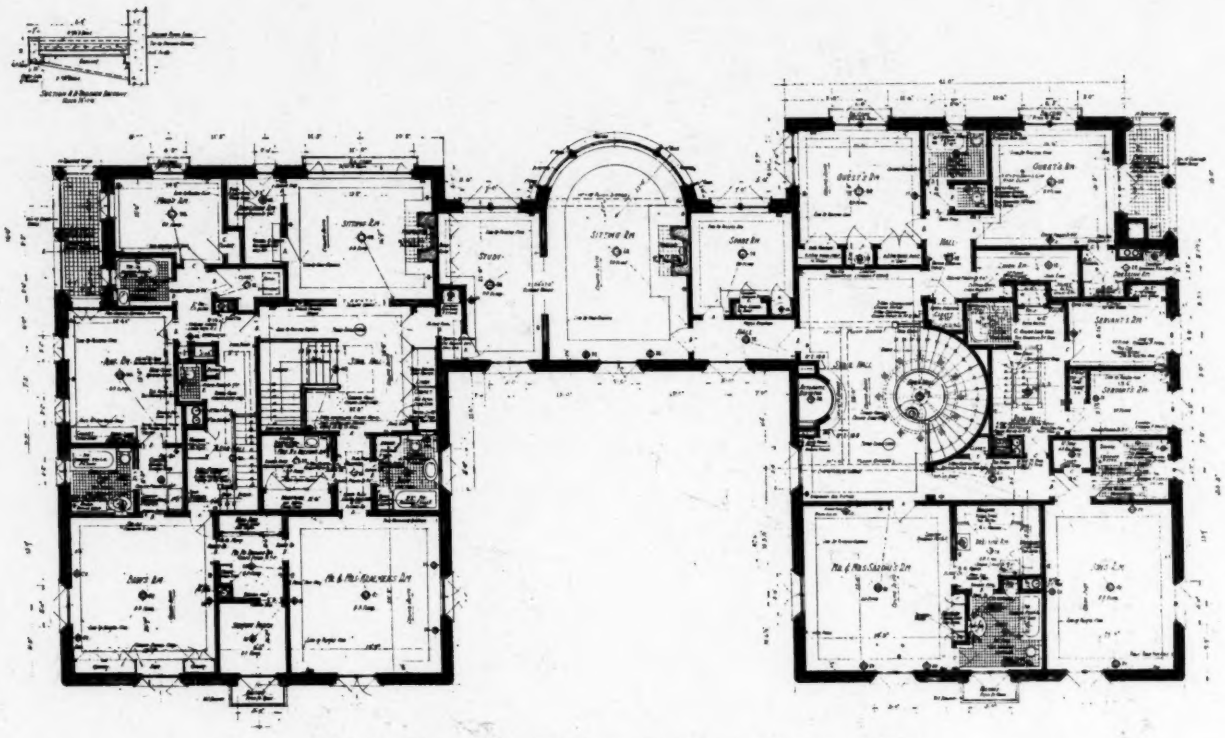
The many uncertainties in this class of construction demands above all other buildings an inspection of the most rigid sort.

RESIDENCE · FOR · LOUIS · SARONI · ESQ·

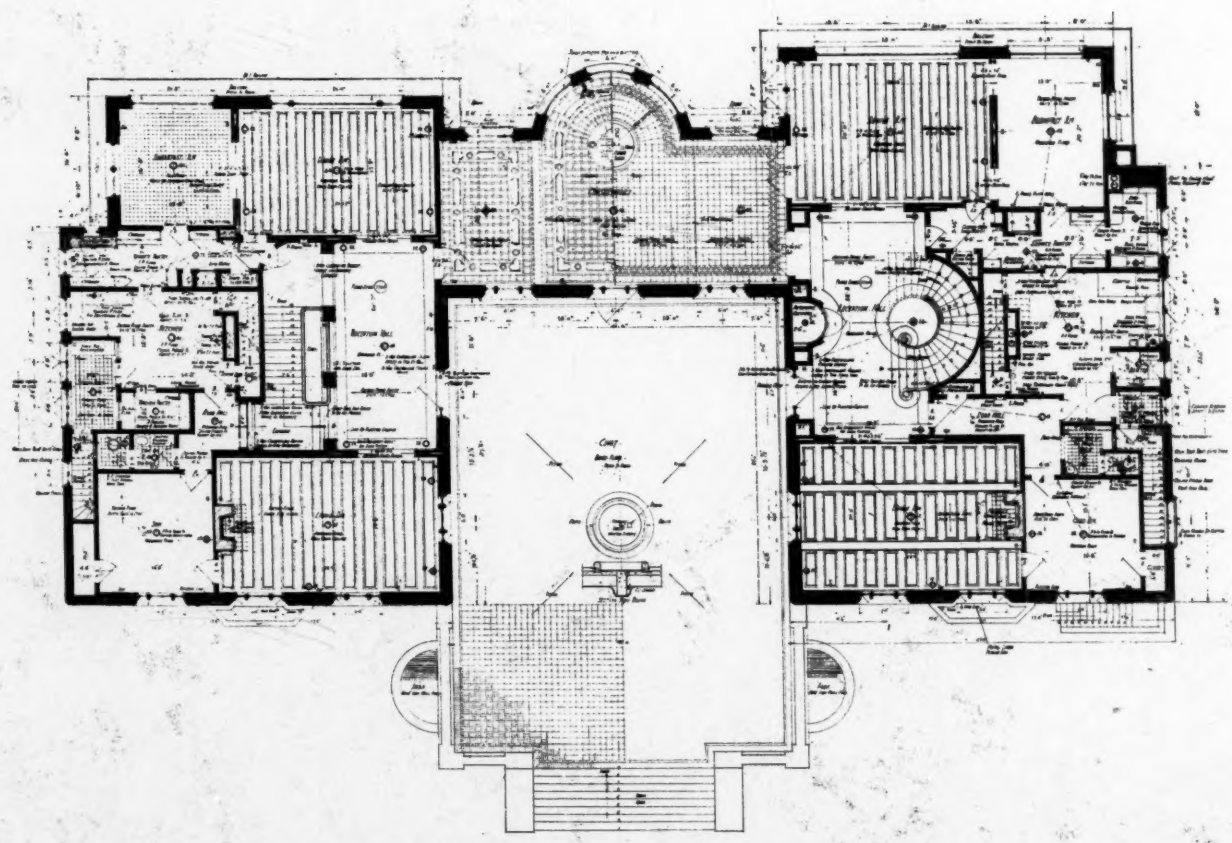


THE PACIFIC COAST ARCHITECT

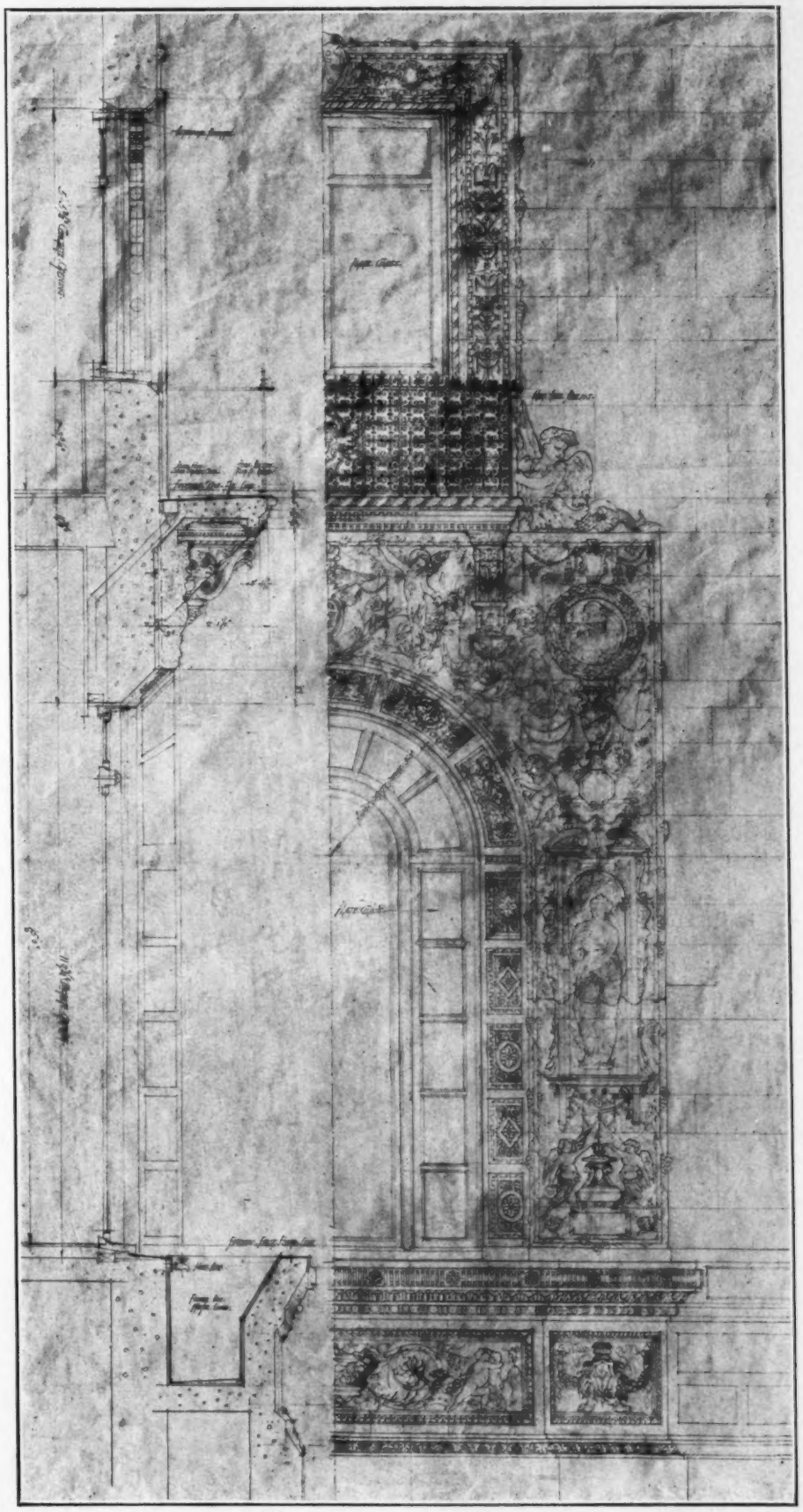
MACDONALD & MACDONALD ARCH'TS



Second Floor Plan, Residence for Mr. Louis Saroni, Esq.

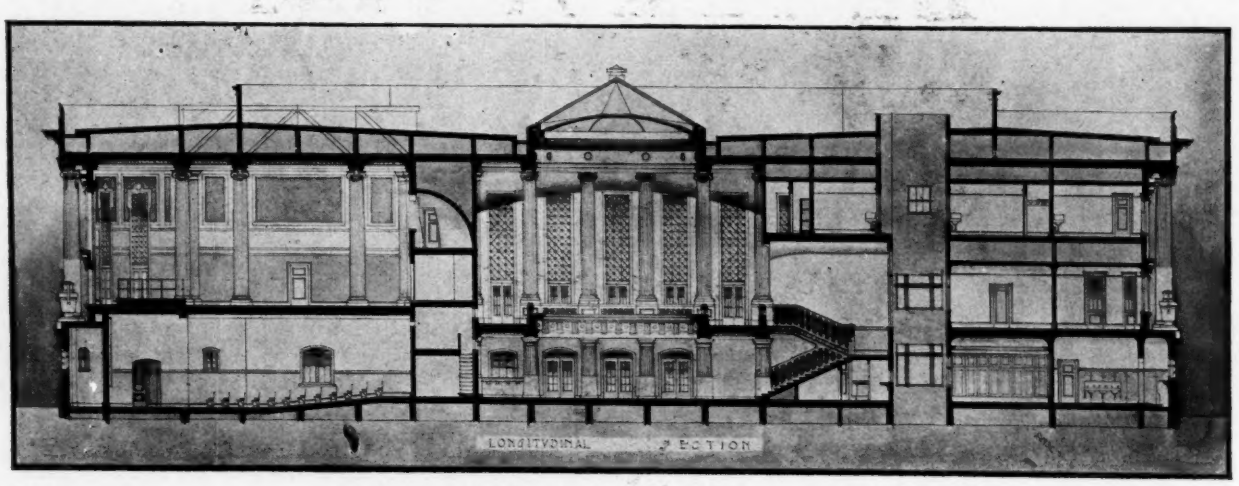


First Floor Plan, Residence for Mr. Louis Saroni, Esq.
MacDonald & MacDonald, Architects, San Francisco

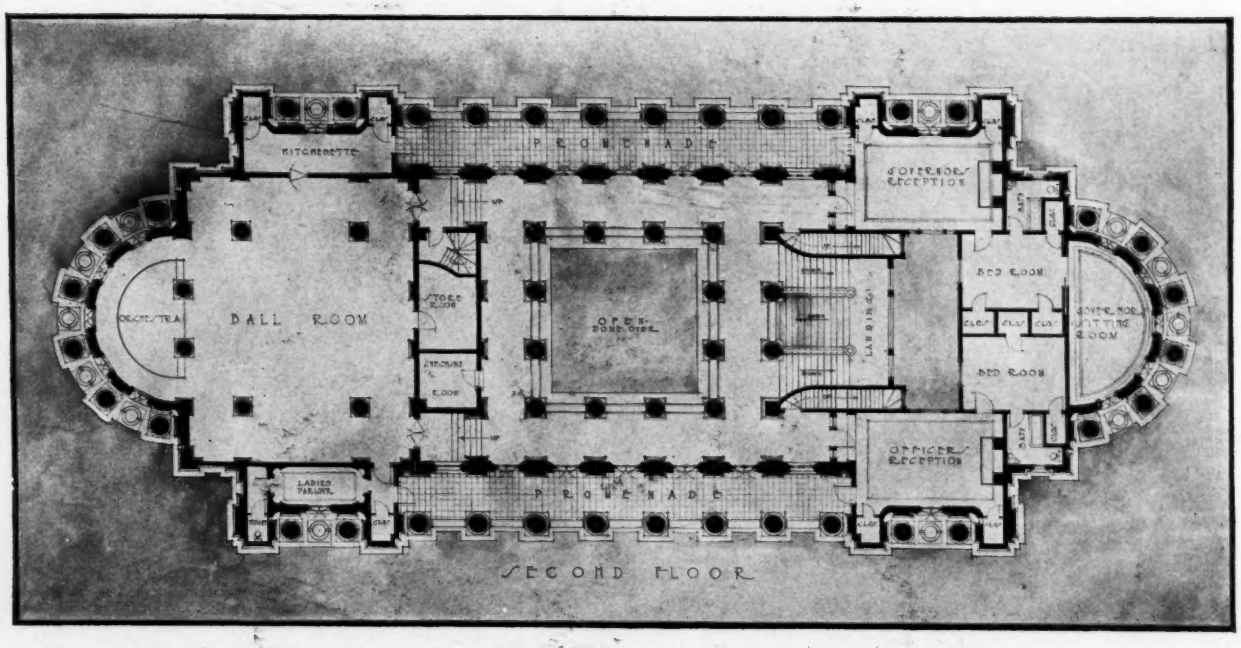


Detail of Motif, Residence for Mr. Louis Saroni, Esq.
MacDonald & MacDonald, Architects, San Francisco —Photo, Gabriel Moulin

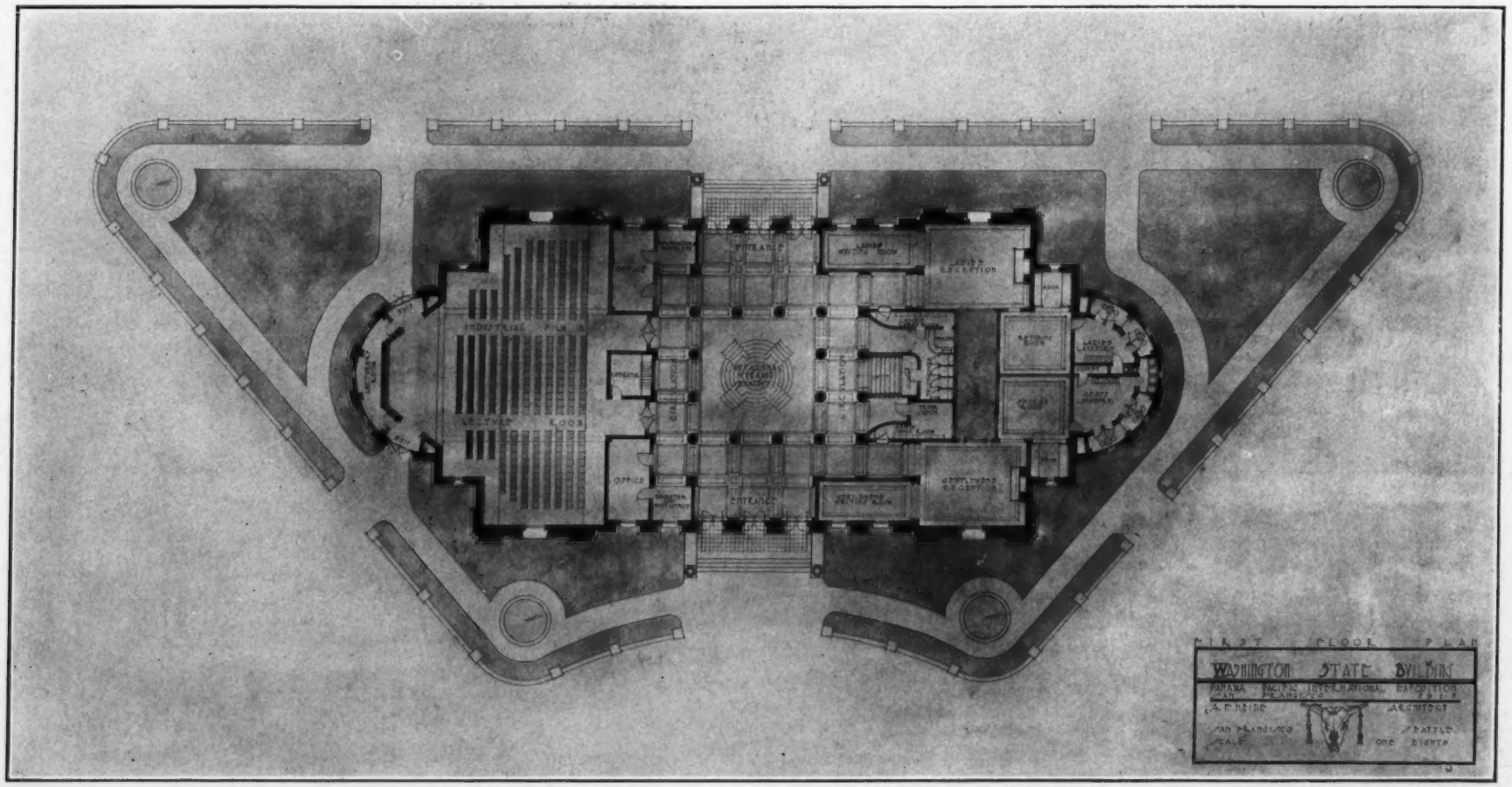
Architect's Model of Motif, Residence of Louis Saroni, Esq.
MacDonald & MacDonald, Architects, San Francisco
—Photo, Gabriel Moulin



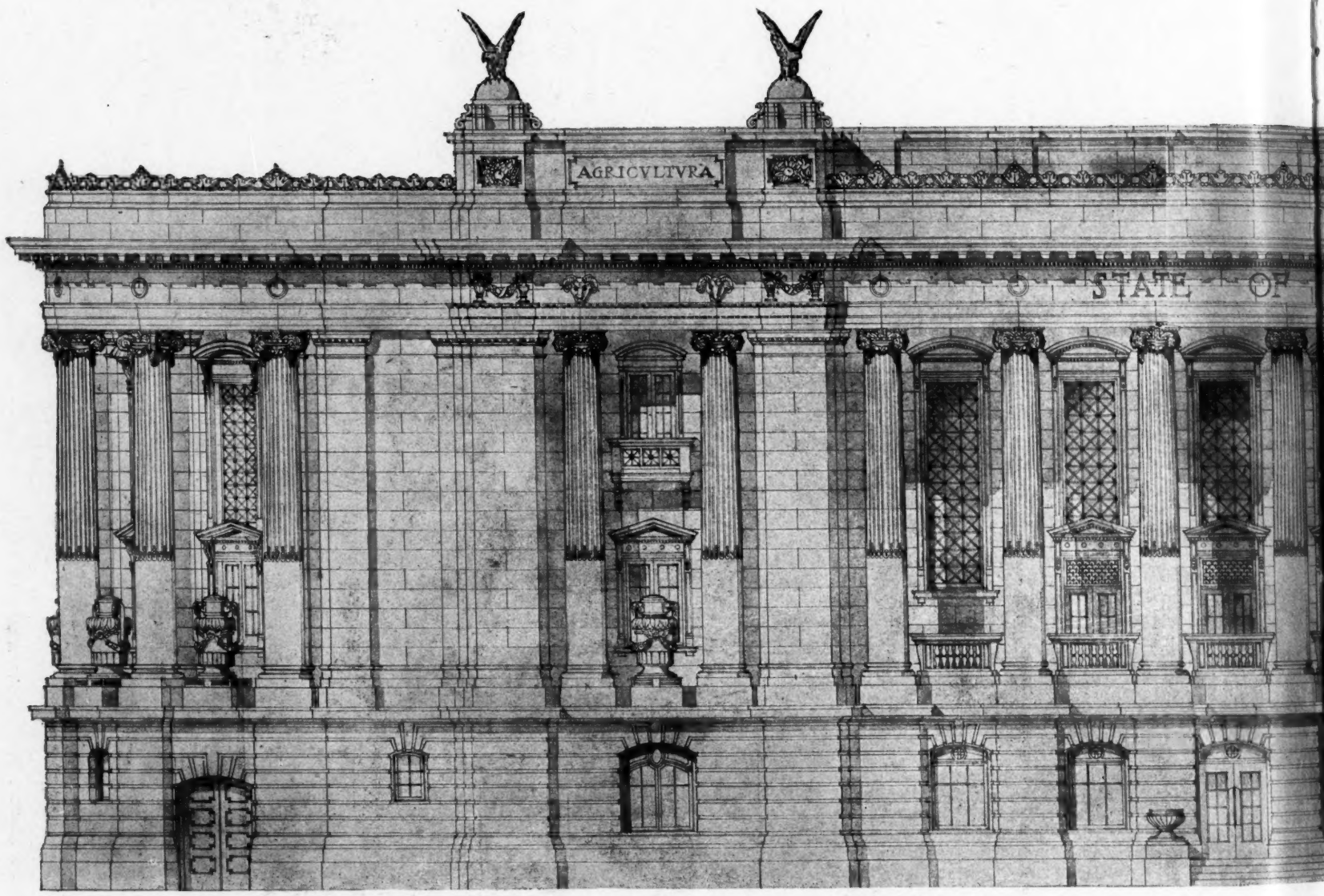
Longitudinal Section, Washington State Bldg., P.-P. I. E.



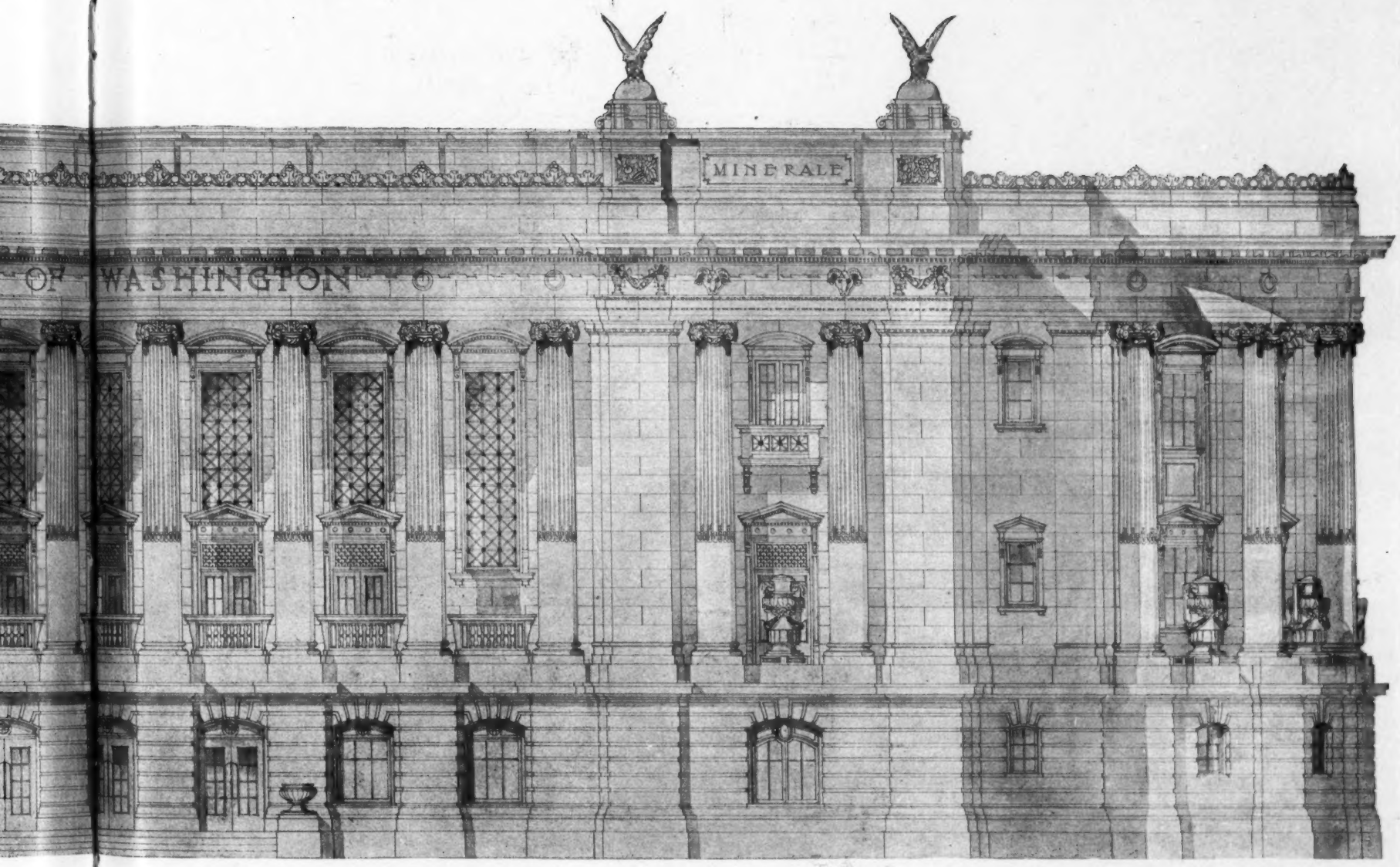
Second Floor Plan, Washington State Bldg., P.-P. I. E.
A. F. Heide, Architect, San Francisco and Seattle



First Floor Plan, Washington State Bldg., P.-P. I. E.
A. F. Heide, Architect, San Francisco and Seattle


AGRICVLTVRA
STATE OF

THE SEAL OF THE STATE OF WASHINGTON
1889



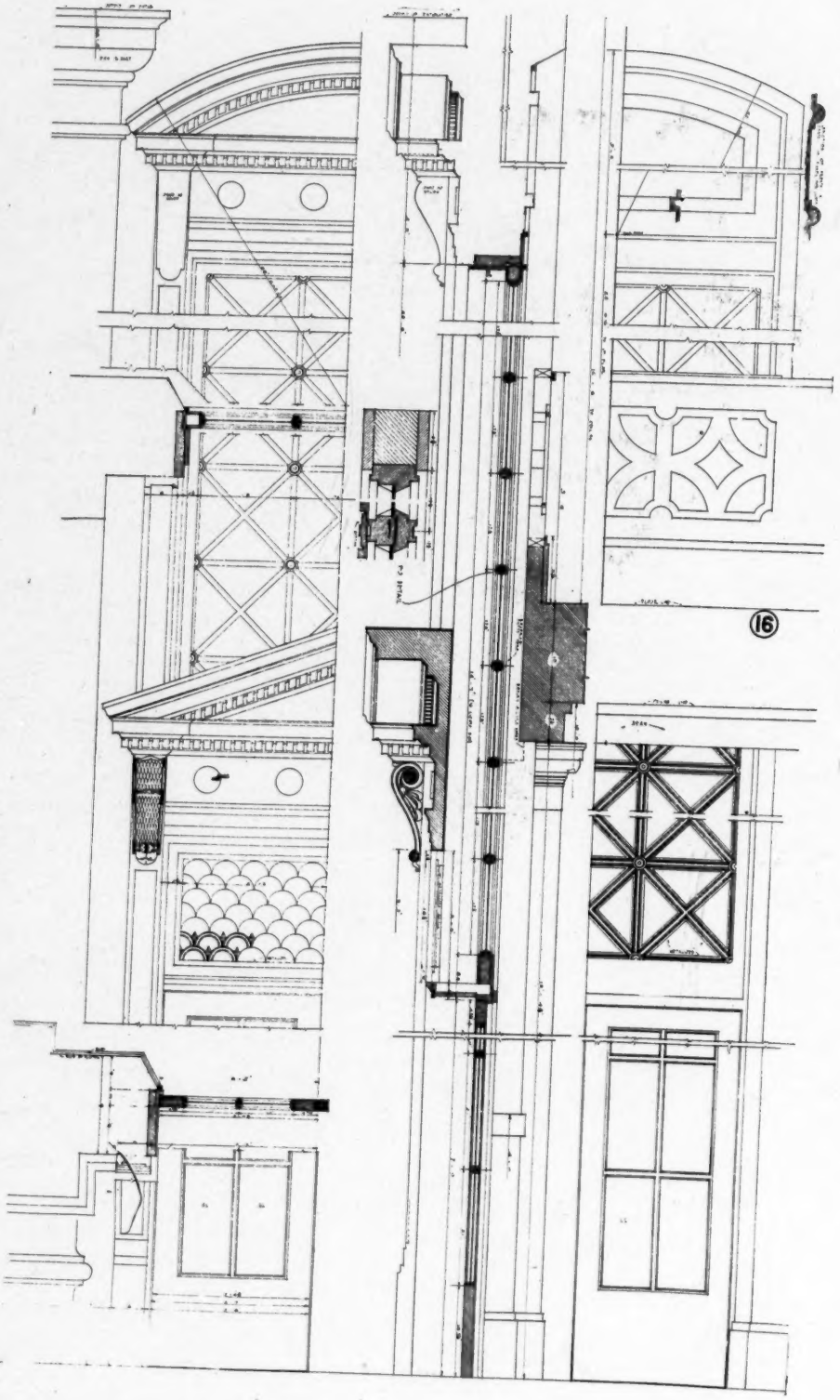
Original Drawings

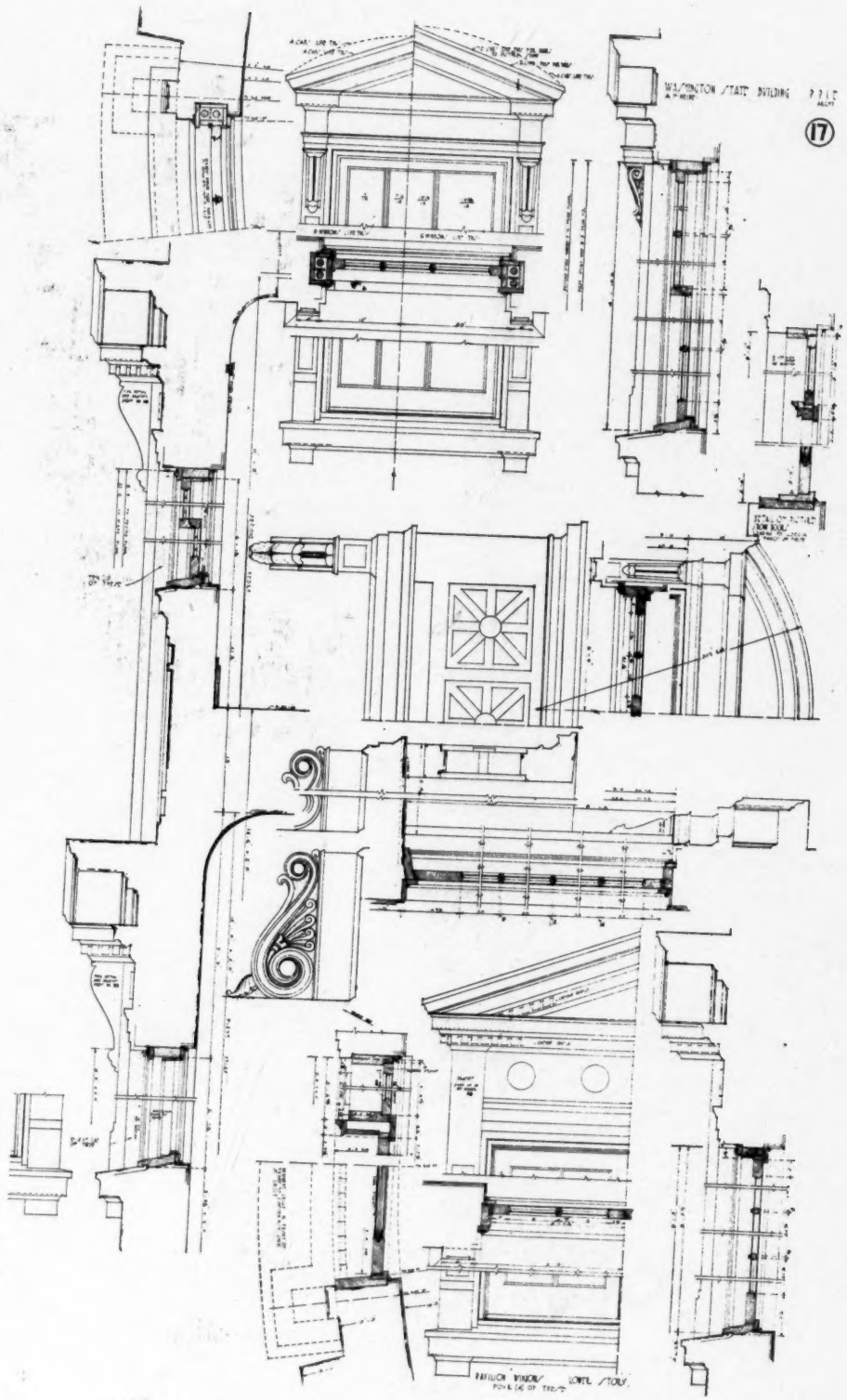
Washington State Building

Panama-Pacific International Exposition

San Francisco—1915

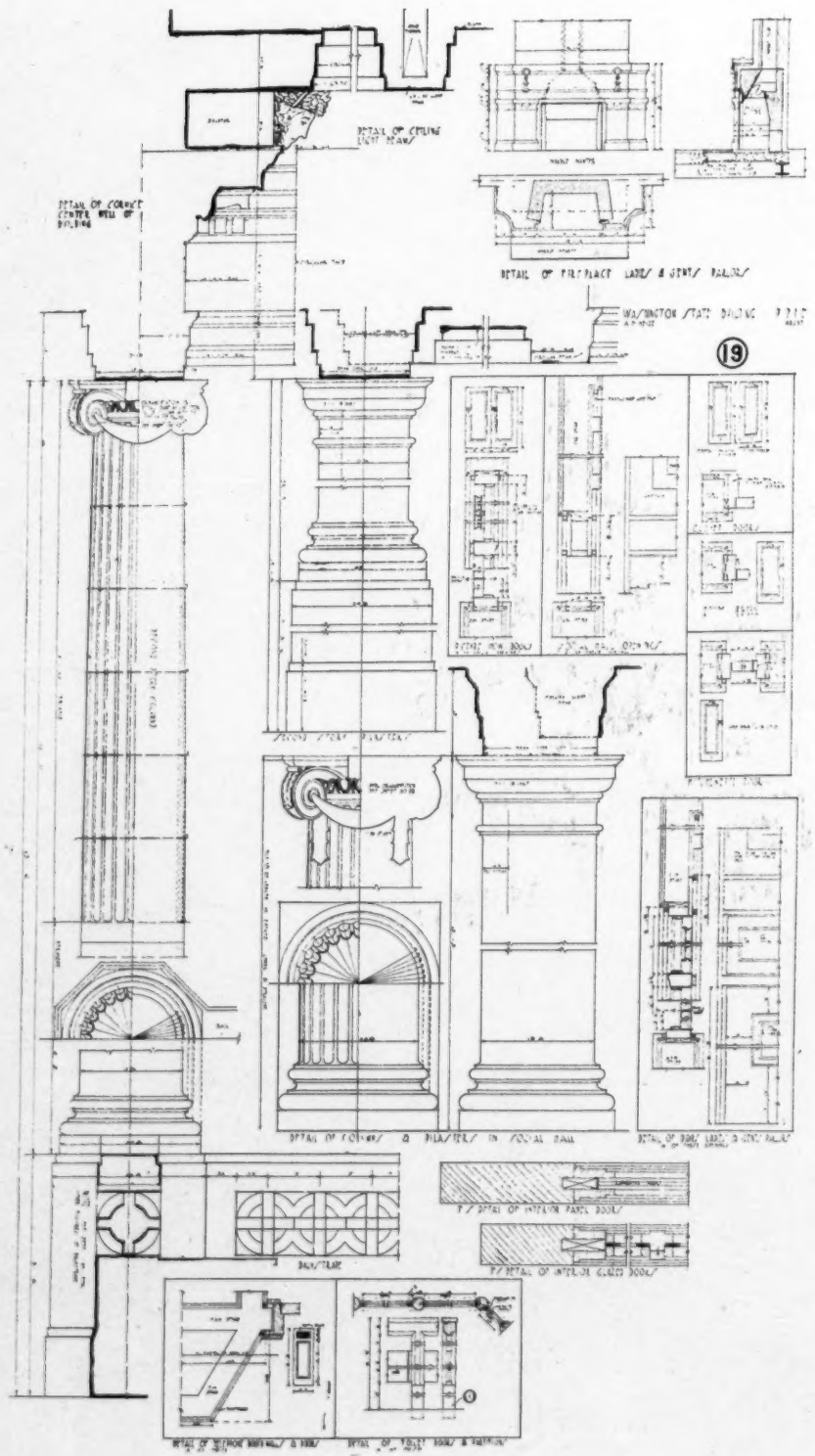
A. F. Heide, Architect,
San Francisco
and
Seattle

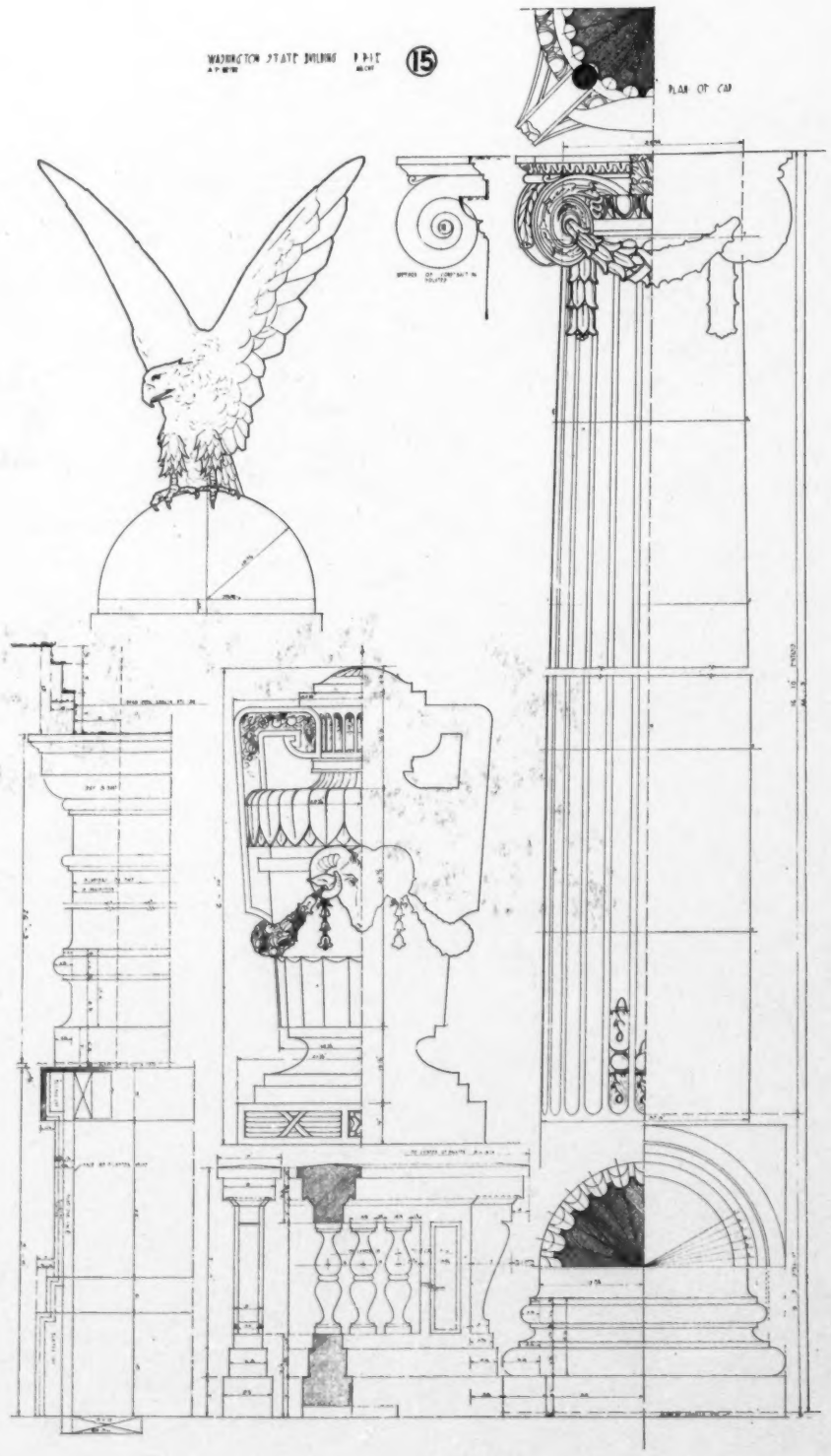




THE PACIFIC COAST ARCHITECT
June, 1914

Scale 3/8" to the 1'0"
Working Details, Washington State Bldg., P.-P. I. E.
A. F. Heide, Architect, San Francisco and Seattle

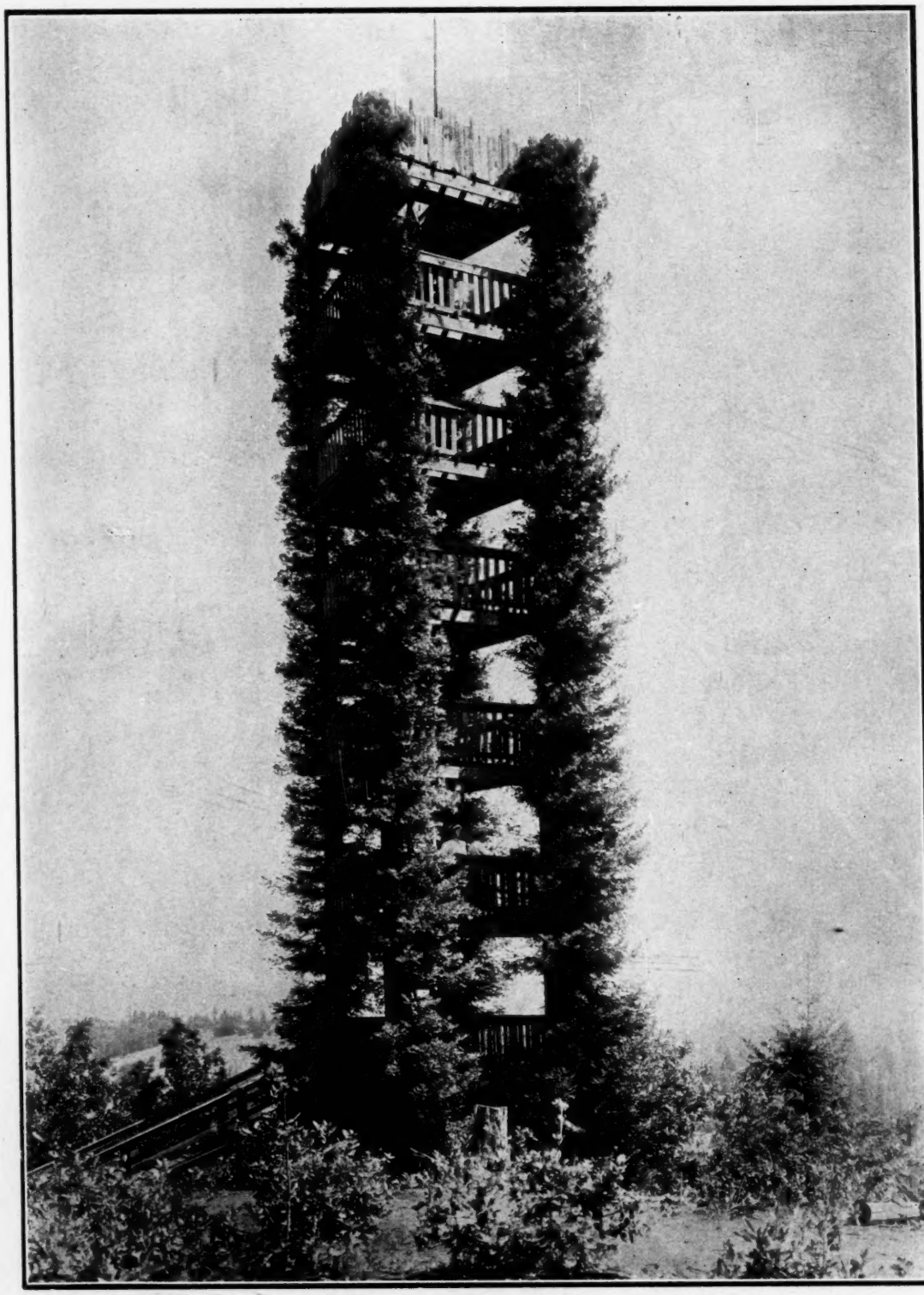

DETAIL OF CEILING LIGHT BEAM
DETAIL OF CORNICE CENTER WELL OF BUILDING
DETAIL OF FIREPLACE LAMPS & STAIR RAILING
WASHINGTON STATE BUILDING P.P.I.E.
19



Scale ⅜" to the 1'0"

Working Details, Washington State Bldg., P.-P. I. E.

A. F. Heide, Architect, San Francisco and Seattle



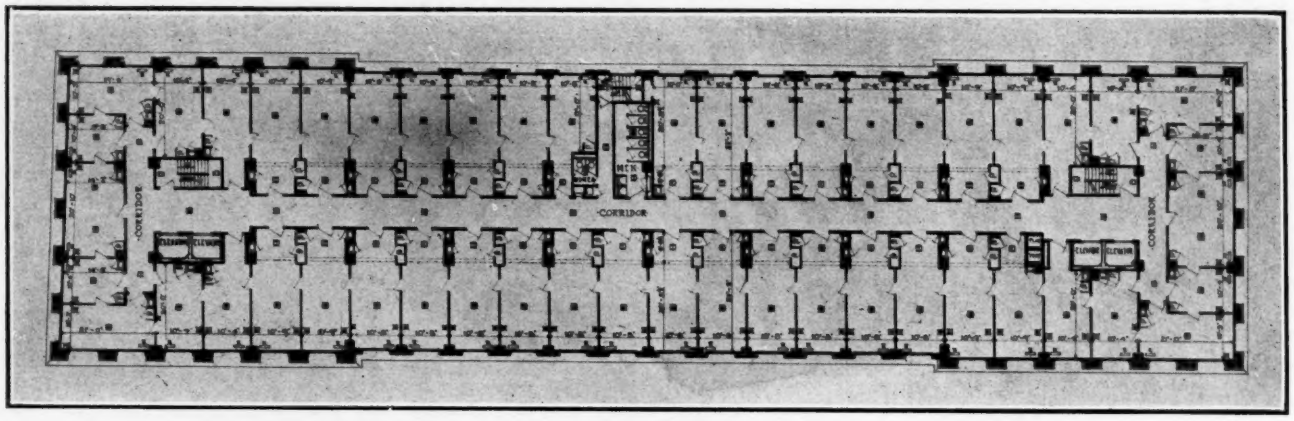
A NATURAL SKYSCRAPER

At Camp Meeker, on the Russian river, in Sonoma county, California, four redwood trees forming the angles of a square have been utilized as the corner supports for a seven-story and roof garden structure.

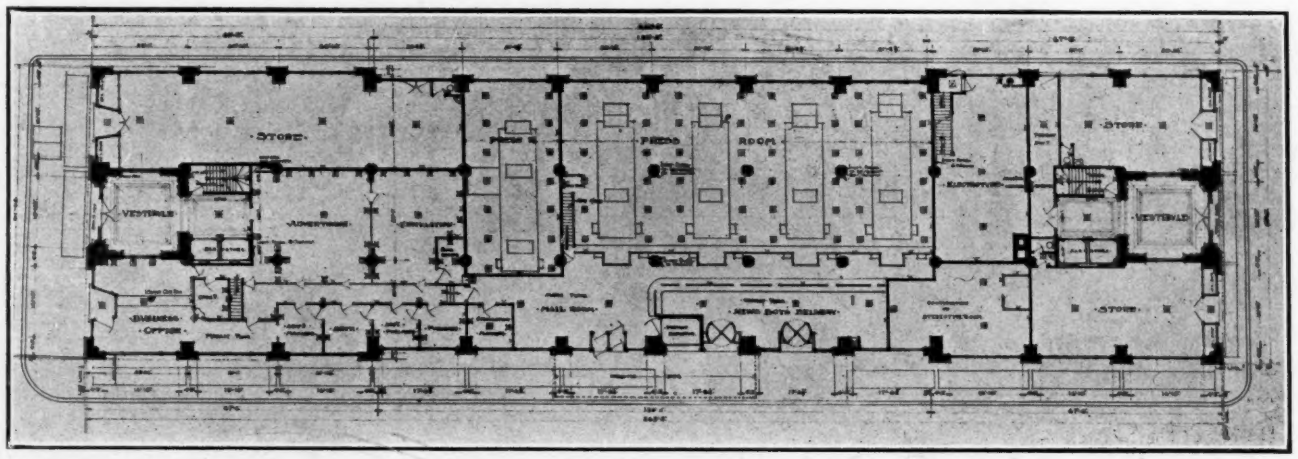
The unique and airy construction of this edifice will appeal to fresh-air enthusiasts, as each floor appears to be well ventilated, with ample opportunity for rays of the sun, moon and stars to enter from all points of the compass.

Theoretically, as the present structure is carried up by the growth of the trees, additional floors will be added from the bottom, so that ground floor tenants of the present may not find themselves so advantageously situated a few years later.

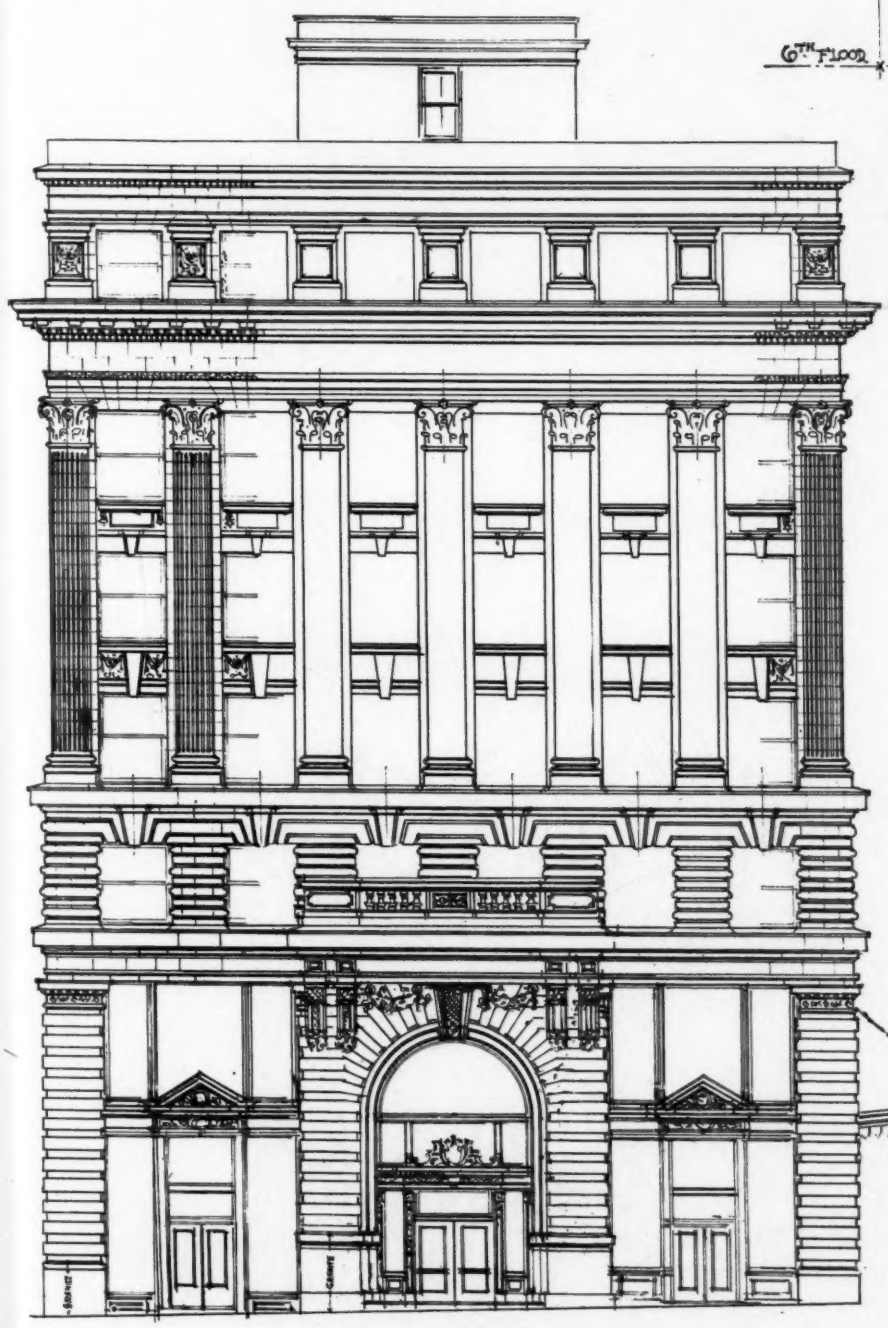
Building for the Call-Post, Sharon Estate Co., San Francisco
Reid Bros., Architects, San Francisco

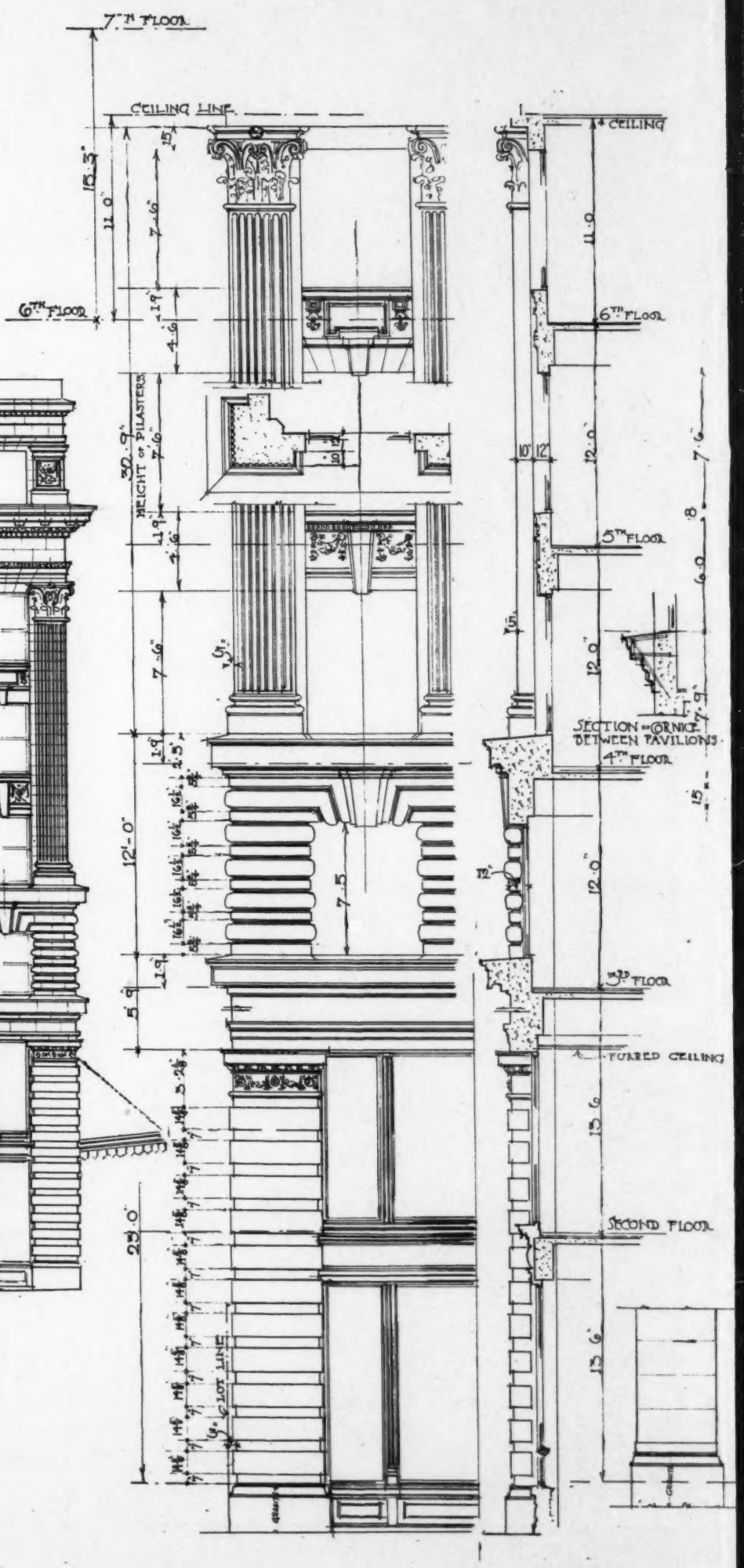


Typical Plan of Office Floors, Call-Post Bldg., San Francisco



Plan of First Floor, Call-Post Bldg., San Francisco
Reid Bros., Architects, San Francisco





EAST ELEVATION

Scale ⅛" to the 1'0"

Detail, Call-Post Bldg., San Francisco

Reid Bros., Architects, San Francisco

THE PACIFIC COAST ARCHITECT
June, 1914

"THE PACIFIC COAST ARCHITECT" is the official organ of the San Francisco Chapter of the American Institute of Architects.

San Francisco Chapter, 1881—President, G. B. McDougall, Russ Building, San Francisco, Cal. Secretary, Sylvain Schnaittacher, First National Bank Building, San Francisco, Cal.
Chairman of Committee on Public Information, William Mooser, Nevada Bank Building.
Chairman of Committee on Competition, Geo. B. McDougall, 235 Montgomery St.
Date of Meetings, third Thursday of every month; annual, October.

OTHER PACIFIC COAST CHAPTERS OF THE AMERICAN INSTITUTE OF ARCHITECTS.

Southern California Chapter, 1894—Vice-President, A. C. Martin, 430 Higgins Bldg., Los Angeles, Cal. Secretary, Fernand Parmentier, Byrne Building, Los Angeles, Cal.
Chairman of Committee on Information, W. C. Pennell, Wright & Callender Bldg., Los Angeles.
Date of Meetings, second Tuesday (except July and August), (Los Angeles).

Oregon Chapter, 1911—President, Morris H. Whitehouse, Wilcox Building, Portland, Ore.
Secretary, Ellis F. Lawrence, Chamber of Commerce Building, Portland, Ore.
Chairman of Committee on Public Information, Ellis F. Lawrence.
Date of Meetings, third Thursday of every month, (Portland); annual, October.

Washington State Chapter, 1894—President, Charles H. Alden, 513 Colman Bldg., Seattle, Wash. Secretary, Arthur L. Loveless, 513 Colman Building, Seattle.
Chairman of Committee on Public Information, Chas. H. Alden, 513 Colman Bldg., Seattle (till further notice send all communications to Arthur L. Loveless, 513 Colman Building, Seattle.)
Date of Meetings, first Wednesday (except July, August and September), (at Seattle except one in spring at Tacoma); annual, November.

Colorado Chapter, 1892—President, Geeorge H. Williamson, 528 Majestic Bldg., Denver, Colo. Secretary, Arthur A. Fisher, 459 Railway Exchange Building, Denver, Colo.
Chairman of Committee on Public Information, Arthur A. Fisher, 459 Railway Exchange Bldg., Denver, Colo.
Date of Meetings, first Monday of every month (Denver, Colo.); annual, September.

THE AMERICAN INSTITUTE OF ARCHITECTS.
The Octagon, Washington, D. C.

OFFICERS FOR 1914.

President ..... R. Clipston Sturgis, Boston, Mass.
First Vice-President ..... Thomas R. Kimbal, Omaha, Neb.
Second Vice-President ..... Frank C. Baldwin, Washington, D. C.
Secretary ..... D. Knickerbacker Boyd, Philadelphia, Pa.
Treasurer ..... John L. Mauran, St. Louis, Mo.

BOARD OF DIRECTORS

For One Year

Irving K. Pond, Steinway Hall, Chicago, Ill.
John M. Donaldson, Penobscot Building, Detroit, Mich.
Edward A. Crane, 1012 Walnut St., Philadelphia, Pa.

For Two Years

Burt L. Fenner, 160 Fifth Ave., New York, N. Y.
C. Grant LaFarge, 25 Madison Sq., N., New York, N. Y.
H. Van Buren Magonigle, 7 West 38th St., New York, N. Y.

For Three Years

Octavius Morgan, 1126 Van Nuys Bldg., Los Angeles, Cal.
W. R. B. Willcox, Central Bldg., Seattle, Wash.
Walter Cook, New York, N. Y.

Auditors

Thomas J. D. Fuller, 806 Seventeenth St., Washington, D. C.
Robert Stead, 906 F Street, Washington, D. C.

SAN FRANCISCO CHAPTER, A. I. A.

A special meeting of the San Francisco Chapter of the American Institute of Architects was held at Tait-Zinkand Cafe, on Tuesday evening, May 5th, 1914, for the purpose of tendering a banquet to Messrs. Chas. Gilbert and Paul P. Cret, and the Honorable James D. Phelan, jurors for the San Francisco Public Library Competition.

Messrs. Henry Bacon of New York; Charles H. Alden, President of the Washington State Chapter, A. I. A., and Kenneth MacDonald were also present as guests of the Chapter. The following members were present:

Geo. B. McDougall ..... President
Edgar A. Mathews ..... Vice-President
Sylvain Schnaittacher ..... Secretary-Treasurer
Wm. B. Faville and Henry A. Schulze ..... Trustees

Applegarth, Geo. A.	MacDonald, Kenneth, Jr.
Bakewell, John, Jr.	McDougall, C.
Brown, Arthur, Jr.	Meussdorffer, C. A.
Cahill, B. J. S.	Meyer, Frederick H.
Coxhead, E. A.	Mitchell, Wm. Garden
Devlin, Leo. J.	Mooser, William
Dolliver, J. W.	O'Brien, Matthew
Donovan, John J.	O'Brien, Smith
Headman, August G.	Pissis, Albert
Hobart, Lewis P.	Polk, Willis
Howard, John Galen	Raiguil, Wm. Otis
Joseph, Bernard J.	Reid, James W.
Kelham, Geo. W.	Reid, Merritt J.
Kraft, Elmer Jerome	Righetti, Perseo
Lansburgh, G. Albert	Reid, John, Jr.
Lichtenstein, Milton	Schroepfer, Albert
Lofquist, John O.	Shea, Frank T.
Longchamps, Fred J. de	Vogel, E. J.

President Geo. B. McDougall presided and introduced the speakers, in whose honor the dinner was given.

Subject to approval,
SYLVAIN SCHNAITTACHER,
Secretary.

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SAN FRANCISCO CHAPTER, A. I. A.

The regular monthly meeting of the San Francisco Chapter of the American Institute of Architects was held at the room of the Chapter, 110 Lick Building, on Thursday afternoon, May 21st, 1914. The meeting was called to order at 4:10 o'clock by Mr. Geo. B. McDougall.

There were thirteen members present.

MINUTES.

The reading of the minutes of the regular meeting of April 16th, and the special meeting of May 5th, 1914, was, on motion duly made and seconded, dispensed with.

STANDING COMMITTEES.

Sub-Committee on Competition, A. I. A.

Mr. Mooser reported that the competition for the San Francisco Public Library had been decided since the last meeting, the design of Mr. Geo. W. Kelham having been selected by the Jury of Award. Mr. Mooser also stated that he had in preparation a written report which would be submitted to the Chapter at the next meeting, calling attention to numerous cases of participation in unauthorized competitions by members of the Chapter competing, and others acting in a judicial capacity.

MEMBERSHIP.

Mr. Louis Theodore Lenzen, having made the necessary application for Chapter membership, and having been balloted upon, Messrs. Schulze and Mathews were appointed tellers to count the ballots. Forty-nine ballots were received and counted and Mr. Lenzen was declared unanimously elected a Chapter member.

COMMUNICATIONS.

The following communications were received and ordered placed on file:

Telegram from D. Knickerbacker Boyd, Secretary A. I. A., congratulating the Chapter on its action in the matter of the Consulting Architects; from Egerton Swartwout, Chairman Committee on Government Architect, letter in re building for the Department of Justice in Washington, D. C., together with statement in circular form regarding same; from Sullivan Jones, member Committee on Contracts and Specifications. A. I. A., matters in re "Quantity Survey." Letter from the Louisiana Chapter, A. I. A., thanking this Chapter for its interest in the Jackson Barracks matter; from the St. Louis Chapter, A. I. A., the extending of an invitation to attend the coming Pageant and Masque to be given in St. Louis; from the Calgary Chapter of the Alberta Association of Architects, requesting information from the local Chapter on "Quantity Surveying." Letter from John Reid, Jr., acknowledging receipt of letter sent him; from the San Francisco Labor Council in re specifying products of the York Manufacturing Company; from C. H. Cheney, Secretary of the San Francisco City Planning Exhibit,

requesting collection to help defray expenditures made during the recent Exhibit; from the San Francisco Chamber of Commerce, in re the improvement of the Ocean Beach; from the American Federation of Arts, requesting name of delegate from the S. F. Chapter to the Convention to be held in Chicago; a copy of the "Quantity Surveyor" for May, and the Proceedings of the Eleventh Annual Convention of the Iowa Chapter of the A. I. A.

UNFINISHED BUSINESS.

There was no unfinished business.

NEW BUSINESS.

With reference to the communication from the Institute Committee on Government Architecture, Mr. Mooser made a statement relative to the matters contained in the communication; and on motion duly made, seconded and carried, the Secretary was directed to send a copy of the Institute Committee's statement to the California representatives in the Senate and House. Mr. Mooser's full report follows:

To the Members of the San Francisco Chapter, A. I. A.

Gentlemen: As a member of the Standing Committee on Government Architecture, I desire at this time to place before you a report just at hand prepared by the Chairman of the Committee, Mr. Edgerton Swartwout, of New York, in conjunction with President Sturgis. This paper treats with certain phases of the Government Architectural Work, and involves three firms of Architects who were declared the winners in three competitions for Government buildings to be erected in Washington, D. C.

I will read the report so that you may have the proper information, as it is earnestly requested that this Chapter, along with all Chapters, give its approval to the document and that the same be forwarded forthwith to all representatives in Congress.

I have also just received the report of the Supervising Architect at Washington and the report of the Public Buildings Commission on Government work; this latter report is a very full and exhaustive one and deals with all phases of the question of sites and building appropriations by Congress and the designing and erection of buildings. There is a majority and a minority report, the latter being sent in by the Postmaster General, Mr. Burleson; from the limited time in which I have had to read its contents it would seem that the minority report is the far better one in all respects, and especially so as it relates to the architectural side of the question. Neither of the reports are very definite in their findings, and it would seem not a very difficult task at arriving at some proper solution of the subject.

The two reports treat with the standardization of plans for at least post offices, but Mr. Burleson's report at least qualifies this scheme with some degree of thought to architectural effects.

I hope that at our next meeting it may be possible to discuss the matter fully, so as a member of the Committee on Government Architecture, I may have the Chapter's ideas and receive its suggestions.

I had the pleasure last week of meeting another member of this committee, Mr. Hugh Roberts, of New Jersey, Architect for his State's building at the Exposition; in discussing the subject as to a course of procedure and the kind of a bill the Institute might father to take the place of the Tarnsey Act, it would appear that the ideas of the New Jersey Chapter expressed by Mr. Roberts are very much in accord with the sentiments of at least the majority of our members, and it is to be hoped that the committee will find a solution of the subject which will be of service to you, and at the same time give the government what we, as Architects, deem a proper mode of securing the best results in handling its buildings.

Respectfully submitted,
WILLIAM MOOSER.

With reference to the communication from the City Planning Exhibit, the Chapter agreed to donate an additional five ($5.00) dollars to help cover the deficiency.

The general idea of the improvement of the ocean beach, as proposed by the Chamber of Commerce was indorsed by the Chapter, and the Secretary was directed to so notify them.

ADJOURNMENT.

There being no further business before the Chapter, the meeting adjourned at 5 o'clock.

Subject to approval,
SYLVAIN SCHNAITTACHER,
Secretary.

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SOUTHERN CALIFORNIA CHAPTER, A. I. A.

The Seventy-second meeting of the Southern California Chapter of the American Institute of Architects was held at the Hollenbeck Cafe, Los Angeles, California, on Tuesday, May 12, 1914.

The meeting was temporarily called to order at 7:40 P. M., by Vice-President A. C. Martin, who introduced Professors J. H. Montgomery, and Arthur W. Nye, of the University of Southern California.

Professor Montgomery delivered an interesting lecture illustrated by stereopticon views on "Electricity and Fire Hazard." This lecture was supplemented by additional commentations from Professor A. W. Nye.

At the close, Professors J. H. Montgomery and Arthur W. Nye were tendered the Chapter's hearty vote of thanks on motion made, seconded and duly carried.

At 8:50 P. M. the Chairman called the meeting to order for the usual procedure of the Chapter's business. The following members were present:

1. A. L. Acker,
2. Joseph J. Blick,
3. A. M. Edelman,
4. Lyman Farwell,
5. Irving J. Gill,
6. Elmer Gray,
7. John C. Hillman,
8. Frank D. Hudson,
9. J. W. Krause,
10. John P. Krempel,
11. A. C. Martin,
12. H. H. Martin,
13. S. B. Marston,
14. B. M. Morris,
15. O. W. Morgan,
16. S. T. Norton,
17. Robert H. Orr,
18. Fernand Parmentier,
19. H. M. Patterson,
20. T. F. Power
21. A. F. Rosenheim,
22. Aug. Wackerbarth,
23. Albert R. Walker.

As guests of the Chapter were present Professors J. H. Montgomery and Arthur W. Nye, of the University of Southern California; John D. Bowler of the Builder and Contractor; H. K. Hensley and Wm. E. Prine of the Southwest Contractor.

The minutes of the Seventy-first meeting of members were read and adopted.

For the Board of Directors the Secretary reported that one meeting had been held on Tuesday, May 12, 1914, and that the Directors at this meeting were instructed to recommend to the Chapter the appointment of a special committee to take proper action in the case of the professional charges preferred against J. Martyn Haenke, member of this Chapter, as the Chapter's committee on Ethics and Practice, which had been appointed to investigate and report on this case, had failed to arrive at conclusions.

In compliance with this recommendation, the Chairman appointed A. F. Rosenheim, Elmer Grey and John P. Krempel as a special committee of investigation in the Haenke matter to report for the following Chapter meeting.

For the Committee on Civic Improvements, Elmer Grey and A. F. Rosenheim reported partial progress toward the forming of a City Planning Commission in the future.

For the Chapter's Entertainment Committee, John P. Krempel reported that A. M. Edelman, member of this Chapter, would present an illustrated lecture on European Travel for the following Chapter meeting, and for the first meeting after the summer vacation, the Chapter would have a lecture from Mr. Octavius Morgan.

Communications were next read as follows:

A postal card from Marseilles, France, from Octavius Morgan, wishing to be remembered to the Chapter members.

From the A. I. A. Sub-committee on Quantity Survey, of the Committee on Contracts and Specifications with reference to the appointment by this Chapter of a Chapter Committee on Quantity Survey. The advisability of this request being obvious, the Chairman announced that he would appoint the Committee in due time.

From the Master House Painters and Decorators Association, of Los Angeles, acknowledging communication from this Chapter advising of the Chapter's adoption of the "Standard Painting Specifications."

From the Municipal League, of Los Angeles, acknowledging this Chapter's co-operation in reference to the recent presentation of the New York City Planning Exhibit in Los Angeles, and urging this Chapter's future co-operation toward the forming of a proper commission and laws on City Planning.

From the Secretary of the San Francisco Chapter, American Institute of Architects, requesting certain changes in the minutes of the Seventy-first meeting of members of this Chapter, with reference to the attitude of the San Francisco Chapter in connection with Mr. Vinson's proposition regarding Architectural League Exhibits, also stating that the San Francisco Chapter was desirous of maintaining a neutral attitude in the matter of Architectural Exhibits to be held during the period of the 1915 Fair. The Secretary announced that he had made corrections in the Chapter's minutes pursuant to the request of the San Francisco Chapter.

From the St. Louis Chapter A. I. A., extending to the members of this Chapter an invitation to attend the Pageant and Masque to be given at Forest Park, St. Louis, May 28th to 31st, 1914.

From the Los Angeles Chamber of Mines and Oil, inviting the members of this Chapter to an excursion to Arizona and Imperial Valley to be held in the near future.

From the Boundary-Stone League, a request for this Chapter to give its endorsement to a petition to the Government of the State of California, and one to the U. S. Government at Washing-

ton, D. C., with reference to the establishing of historic mile stones, and historic county boundary stones upon the Pacific Coastwise Highway from San Diego to the Oregon state line, and upon all transcontinental Federal Highways reaching the Pacific Ocean through California, Oregon, Washington, Nevada, New York and Texas.

The Chapter's endorsement was unanimously granted on motion made by Frank D. Hudson, seconded by A. F. Rosenheim, and duly carried.

The Chairman next announced the appointment of the following committees:

On Institute membership:
A. M. Edelman, Chairman;
H. M. Patterson,
J. C. Hillman.

On Quantity Survey:
O. W. Morgan, Jr., Chairman;
S. B. Marston,
F. T. Power.

Revision of the Chapter's constitution and by-laws:
A. C. Martin, Chairman;
S. T. Norton,
Fernand Parmentier.

After various discussions, the Secretary was instructed to forward a night letter to Octavius Morgan, at present in Washington, D. C., urging Mr. Morgan to take up the matter of the 1915 Institute convention at Los Angeles, with the President and Board of Directors of the Institute.

The Secretary was instructed to communicate with the Secretary of the Institute requesting application blanks for Institute membership for distribution to Chapter members.

The meeting adjourned at 10:10 P. M.

FERNAND PARMENTIER, Secretary.

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OREGON CHAPTER, A. I. A.

Meeting held April 16th, 1914, at the University Club, Portland, Oregon, was called to order by Vice-President Doyle in the absence of President Whitehouse.

The following members answered the roll call: Messrs. Jacobberger, Smith, Fouilhoux, Mayer, Lazarus, Patterson, Williams, Beckwith, Holford, Doyle, Thompson and Lawrence.

Mr. Fouilhoux moved and Mr. Thompson seconded that the minutes of the last meeting be accepted as printed. Motion carried.

Minutes of the Executive Committee meeting held April 2nd, read and approved.

REPORTS OF COMMITTEES.

Legislative Committee, Mr. Williams, Chairman.—"The undersigned, Chairman of your Legislative Committee, begs leave at this time to call your attention to the publication in The Oregon Building Record of some of the decisions of the Board of Appeals that have been rendered since the first meeting of said board, and to the fact that those published in the Record were but a small minority of the decisions that have been rendered by them.

All of the decisions rendered by said board should be published, to the end that each and every member of the Chapter may be conversant with each and every proceeding of the board since its inception into office." Ordered filed.

Committee on Building Laws, Mr. Fouilhoux, Chairman—"The undersigned, Chairman of the Committee on Building Laws, begs to submit the following report: No meeting of our Committee has taken place since the last meeting of the Chapter. I took up with Mr. Ion Lewis, Chairman of the Board of Appeal, the question of making public the decisions of the Board, and was informed by Mr. Lewis that owing to lack of funds they were unable to do any printing or mailing of these decisions. At his suggestion I took up the matter with the Inspector of Buildings, requesting him to arrange with either the Oregon Building Record or the Portland Daily Abstract for the publication of these decisions. As the members of the Chapter may have noticed the publication of these decisions has started in the Oregon Building Record." Ordered filed.

SPECIAL COMMITTEES.

Rose Festival Committee—Mr. Mayer reported: "Your committee upon the Rose Festival begs to report that the drawings mentioned in its last report, and which embodies the ideas of this committee, were given to Mr. Curry, representing the Rose Festival Committee. A rough estimate furnished by the Chicago Costume House, was given with the drawings. This estimate showed that the scheme, as presented, could be executed for approximately $8500, which is well within the sum of $10,000 that was to be allowed. Mr. Curry promised that the plans would be presented at the next regular meeting of the Rose Festival Committee and a report of its action sent to your committee. Nothing further has developed."

Ordered filed.

BALLOTING.

Vice-President Doyle appointed Messrs. Beckwith & Williams as Tellers, who reported, after counting the ballots, that Mr. Ion Lewis was elected to the Board of Trustees to succeed Frank Logan, resigned.

READING OF COMMUNICATIONS.

Letters from Rose Festival Auxiliary and Rose Festival Association, asking Chapter to participate in the daylight parade were read. Mr. Williams expressed himself as favoring the Institute and Architectural Club joining hands in a float for the parade. Mr. Thompson moved and Mr. Fouilhoux seconded that Mr. Williams be appointed Chairman of a committee of his own selection to confer with the Architectural Club on the subject and refer the matter back to the Executive Committee for action. Motion passed.

Copy of advertisement explaining functions of an architect as published by the Colorado Chapter of the A. I. A. was read. Mr. Mayer moved and Mr. Thompson seconded that the advertisement be referred to the Committee on Public Information to revise and to publish if deemed advisable. Secretary was instructed to include the advertisement in the minutes in order to reach all members of the Chapter. The advertisement is as follows:

"An architect's professional service to his client means that he must be so constituted that the creative faculty will be uppermost, as his duties lie primarily along these lines; to design or create, to hold ideas into form and color and demonstrate by drawings and renderings all such ideas. He must be prolific of suggestion as to modern and up-to-the-moment improvements and equipments for buildings of any and all types. To perfect himself in all these matters requires years of careful study and practice. He must also be able to execute, direct and construct these ideas, and his supervisions of work during execution is of great importance, as without his sympathetic attention to detail no completed work can be said to bear the stamp of individuality. He must visit shop and studio where various works that are to become parts of the structure are in course of preparation, and by careful criticism and instruction at first hand, get the best of the mechanic's or artisan's efforts.

His knowledge of all the building trades must be broad and accurate. A modern structure, however modest, is not unlike a human organism; having its skeleton or frame, its nerves and arteries or pipes and conduits, its drainage, its nerve system or electric wires, its finish that clothes the frame and lastly, its color, that important item that marks the consummation of the particularly ideal.

How can an architect prove a benefit in a building operation, large or small?

Firstly—He makes comprehensive drawings and specifications, being in all things practical, structural and ornamental. Secondly—He is enabled through these instruments to procure competitive bids, or proposals, from reliable contractors, thus enabling an owner to secure the best at the least cost, thus saving in most cases, all, if not more, than the amount of his fee. Third—Having comprehensive plans and specifications, all questions of dispute are readily adjusted, if such disputes should arise; he is the third party to any such controversy and absolutely unbiased in opinion. Fourth—All payments must receive his sanction; thereby throwing an absolute safeguard around the owner in all financial transactions. No reasonable person is satisfied with a druggist's suggestions for remedying his bodily ailments. He promptly engages the trained man, the physician or surgeon. No reasonable person would attempt to argue his own brief before a court of law. He employs the professional man, the lawyer.

Therefore, why not employ an architect? The problems involved at this day and age of the world in building improvement are just as complex and present as many difficulties to the layman as any of the above noted conditions and certainly if the investor or the home builder is to avoid difficulties or disaster, then the trained professional man, the architect must be retained."

Letter from Mr. Whitaker in reference to State License Laws, etc., was referred to the Legislative Committee. Mr. Williams spoke upon the difficulty of passing such a law at Salem and spoke for the concentration of effort on one bill, preferably that creating the State Architect's office.

Letter from Julius Franke, Chairman of Committee on Fire Prevention of the Association was ordered filed.

Letter from President Foster of Reed College requesting the Chapter's co-operation with the Portland 1915 Conference, to be held at Reed College in May, referred to the Committee on Public Information with power to act.

Standard form of competition programme, architectural competitions, Constitution and By-laws of the American Institute of Architects, etc., received by the Secretary. The Secretary was instructed to secure additional copies of the documents for distribution among the Chapter members.

Letter from Mr. Medary of the Competition Committee of the Institute, requesting the arguments in favor of the Oregon Chapter's action in favoring competitions for public buildings costing

over a certain sum, referred to Competition Committee of the Chapter for answer.

UNFINISHED BUSINESS.

Employment of architect on Inter-State Bridge was discussed. Committee on Publicity instructed to publish the fact if an architect had been retained.

NEW BUSINESS.

Mr. Thompson moved and Mr. Holford seconded that the Secretary be instructed to get figures for printing the schedule of charges as approved by the Chapter, submitting them to the Executive Committee with power to act.

Motion passed.

Mr. Jacobberger asked about the progress of the new building code, especially that portion modifying the fire-proof restrictions on School House buildings as purported to be requested by the School Board and County Commissioners. Mr. Fouilhoux responded.

There being no further business the meeting adjourned.

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WASHINGTON STATE CHAPTER, A. I. A.

The May meeting of the Washington State Chapter of the A. I. A. was held Wednesday evening, May 6th, at the College Club, preceded by dinner, 17 members being present.

A Chapter Committee on Quantity Survey was appointed, consisting of Bebb, Chairman, Willcox and Stephen.

The special committee appointed to meet with the Charter Revision Commission reported that after hearing the arguments of the committee, the Commission had decided to retain the Board of Appeals in the new charter.

The committee appointed to co-operate with a joint committee of the Fine Arts Society and the Municipal League reported that the Charter Revision had decided to incorporate a provision for a Fine Arts Jury in the new charter.

The question of the construction of mill buildings in the first Fire District was referred to the Ordinance Committee.

A committee was appointed to devise a form of notification to manufacturers who send out trade catalogues which do not conform to standard sizes, that such catalogues are consigned to the waste basket. The Secretary was instructed to notify the Secretary of the Institute that such action had been taken with the request that he notify the Secretary of each Chapter concerning it, with the suggestion that they take similar action.

After discussion of the report of the committee which had under consideration a scheme to supply the public with stock plans of low cost houses at a trifling cost, a committee was appointed to consider ways and means to put such a plan in operation, to report at a later meeting.

ARTHUR L. LOVELESS, Secretary.

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COLORADO CHAPTER, A. I. A.

The regular monthly meeting of the Colorado Chapter of the A. I. A. was held at the Shirley Hotel at 12:30, May 4th, 1914. The meeting was combined with a special luncheon and the following members were present: Messrs. Williamson, H. W. Baerresen, Harnois, Biscoe, Marean, Manning, Cowe, Bettcher and W. E. Fisher. Mr. Frewn and Mr. Henry Read were also present as guests of the Chapter. The meeting was called to order by the President, George H. Williamson.

MINUTES.

The reading of the minutes of the April meeting, also the special April meeting, was suspended, copies having been sent to all members of the Chapter.

STANDING COMMITTEES.

Mr. Bettcher reported an interview with the Plumbing Inspector, who stated that he considered the present plumbing ordinance as entirely satisfactory. He also interviewed Mr. George E. Smith, who offered his services for the work in the revising of the ordinance.

UNFINISHED BUSINESS.

There was no unfinished business from the previous meeting.

COMMUNICATIONS.

The following communications were received: Letter from Mr. William Cowe, inquiring of the Chapter regarding the practicing of architecture of the Building Inspector, also a complaint regarding the notices issued from the Secretary's office, complaining about the poorly printed reports and notices, also regarding the Code of Bidding and Builders suggested by Mr. Baerresen. Three letters from Mr. MacLaren regarding the competition of the Colorado Building of the Panama-Pacific Exposition. Letter from F. L. Ackerman of New York regarding the Commission for the height of buildings of New York, together with a report of the investigation on the subject. Letter from the Denver Chamber of Commerce offering further information for the competition for the Panama-Pacific Exposition. Letter from H. D. Hammond, Director of Works on the Panama-Pacific Exposition, regarding the cost of buildings built of staff. Letter from Mr. R. S. Roeschlaub asking for Chapter reports of our monthly meetings. Letter from S. W. Jones asking for a committee on Quantity Survey as recommended by the last Institute Convention.

ADDRESS BY. MR. READ.

Mr. Williamson, in introducing Mr. Read, referred to Mr. Read's public service which has been given to our city so unstintedly and without remuneration. The benefits which the city has derived from his splendid service will grow from year to year. Mr. Read then addressed the Chapter, giving an outline of the work of the many problems of our Civic Center. The work on the Civic Center began in 1905, the movement having been started by the Art Commission, and it was decided to see what could be done towards beautifying that portion of the city at the intersection of Broadway and Colfax avenues. Mr. Robinson, the landscape architect, was called in as an expert in 1906 and recommended the clearance of a space from the courthouse to the capitol, and prepared preliminary studies for this proposed Civic Center. Two difficulties, however, had to be overcome. One was the fact that the two buildings were placed at right angles, and another was the large expense which would be incurred in condemning and buying the valuable property between these two buildings. The Art Commission also recommended the bonding of the city with 50-year bonds. It was defeated by the people. The Art Commission, however, was not discouraged and was generously supported by some of the architects and kept up this work for over six years, financing it themselves through subscriptions and without cost to the city.

About this time Mr. McMonnies arrived in Denver to prepare the preliminary work for the Pioneer Monument, corner of Colfax Avenue and Broadway, and he suggested utilizing the property directly west of the Capitol for the Civic Center. This plan was finally decided upon and Mr. Olmsted, with Mr. Brunner as an associate, were retained as landscape architects to design the Civic Center, which is now becoming a reality, and the Park Commission is now proceeding with the planting of groves of trees on the Broadway side of the Civic Center.

Mr. Read also offered some valuable suggestions regarding the proposed new building ordinance. He referred especially to the smoke nuisance and suggested that all plans for buildings, involving heating plants, should be passed upon by the smoke inspector and also by a board of unpaid commissioners of heating engineers to pass on this work. He expressed the opinion that a large amount of our smoke nuisance was due to the forcing of plants on account of the boilers being undersized and he maintained that boilers of ample capacity would reduce the amount of smoke very largely. He also referred to the new billboard ordinance and also advised that no billboards should be allowed on buildings unless they were of fireproof or slow-burning construction, as they were not only a menace to the public safety, but they also ruined the appearance of some of Denver's most attractive buildings. He regarded the new billboard ordinance as a most excellent one.

ADJOURNMENT.

The Chapter then adjourned at 3 o'clock.

Subject to approval,

W. E. FISHER,
Acting Secretary.

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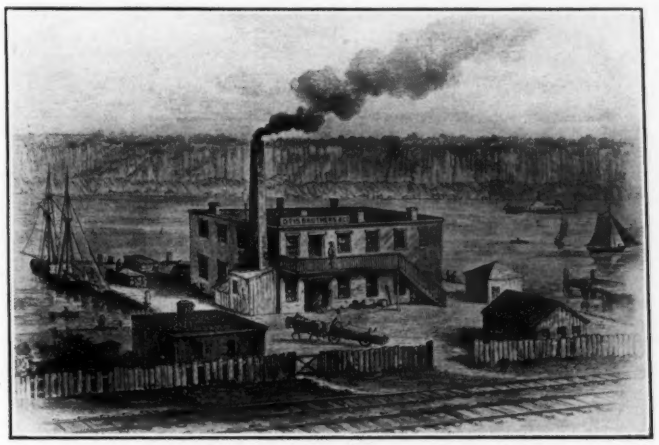
Largest Manufacturer of Elevators

In 1853 Elisha Graves Otis began building hand power and later steam power elevators, in a small shop on the bank of the Hudson River, in Yonkers, N. Y. In 1868 Otis Brothers & Company was organized, and two years later began the erection of a new and larger factory. This factory consisted of a four-story brick building about 40 x 100 feet, and a small outbuilding. The former building still stands as one of the shops of the present works.

As the steam power, and later the hydraulic elevator, was developed and perfected by Otis Brothers & Company, a rapidly increasing volume of business resulted and frequent additions to the plant became necessary. In the early nineties, when electricity as a source of power began to come into general use, and a demand for electrically operated elevators had been created, the company's engineers and inventors turned their

attention to this new field. Success met their efforts, and during the next several years a rapidly increasing proportion of the company's product was of the electric type. The early Otis electric elevators were all of the worm gear drum type, and were operated by Eickemeyer bi-polar motors. The demand for electric machines led to the organization of the Otis Electric Company and the erection and equipment of a large five-story brick electric shop across the street from the elevator factory.



Original Yonkers Works of The Otis Elevator Co.

In 1898 the Otis Elevator Company was organized, and within the next few years the electric and the elevator departments were consolidated. With the phenomenal development and prosperity of the country at this period came the constantly increasing demand for Otis elevators of all types, whose merits have been recognized for years as the standard of the world. In addition to the manufacture of its perfected type of elevators, the exploitation of the escalator was begun. During the last decade much additional ground area has been acquired for the Yonkers works. At present the Yonkers works are by far the largest and best equipped elevator plant in the world. Its product has been brought up to the highest possible state of perfection. About 150,000 square feet of ground are under roof, and the floor area exceeds 360,000 square feet.

The works are located within a few hundred feet of the city hall and business center and of the main station of the New York Central railroad. The main line of the railroad separates the works from the docks on the Hudson River front. Cars for outgoing freight stand on a siding at the doors of the shipping department. A siding for incoming freight runs into the works yard, where the freight is unloaded by traveling cranes upon cars of the works industrial railway system. Coal, sand, lumber, etc., are unloaded at the company's docks located but a few hundred feet from the main part of the plant.

In addition to the Yonkers works, large manufacturing plants at Buffalo, Harrison, N. J., Chicago, Hamilton, Ontario, Houston, Texas, San Francisco, Quincy, Illinois, Berlin, London and Paris form part of this organization.

Returning to the progress of the elevator industry in general, since the day when Jack and Jill had the difficulty with the pail of water because there was no elevator available, there have been continuous efforts to improve upon the methods of transporting goods and people from one level to another. As might be expected, it has required much more ingenuity to satisfactorily elevate the latter than the former. We know that freight hoists were in use some two or three centuries B. C., but no passenger lift appeared until about eight centuries later, and then about one thousand years after that we find a record of not more than one or two isolated instances of the use of apparatus for hoisting people. The early devices were operated by human power, this being succeeded by the simplest form of hydraulic equipment in which a ram supporting or carrying a platform was worked up or down by the admission or ejection of water from a closed cylinder.

Following this type, in the hydraulic line came the geared hydraulic machines, in which the cylinder was retained but the ram became a piston, traveling but a portion of the distance the car had to run, cables being introduced to connect the piston and car, these cables passing around multiplying sheaves to give the necessary car travel. The early power elevators, other than the hydraulic, employed the winding drum for the cables, this machine being driven through the medium of spur gearing, the gearing being driven from a line of shafting by means of a belt, or by steam engine, without the use of line shafting. The spur gear engine was followed by a machine employing a worm and gear drive, eliminating the fault inherent in the spur gear machine, namely, the danger of the load on the car being too great to be sustained by the power available to drive a machine, resulting in a runaway and smashing of the car at the bottom of the hoistway.

Elisha G. Otis exhibited at the World's Fair in the Crystal Palace, New York, the first elevator which employed a device for preventing fall of the car in case the cables broke. This marked the real beginning of the elevator as a passenger conveyor, although it was some years before the business developed to considerable proportions. Mr. Otis was a very conservative and conscientious manufacturer, and for a considerable time made a practice of not entering into one contract until the last one taken was completed to everybody's satisfaction. Safety devices to prevent the

Present Yonkers Works of The Otis Elevator Co.

falling of the car were provided whether they were contracted for or not, as an evidence of the maker's intention to give the customer the best equipment available. The same policy regarding the maintenance of a high standard has been followed by the Otis Elevator Company during the sixty years of its existence, and while they do not wait until the last contract is completed before accepting another, the organization does give the closest possible attention to every minute detail of each installation. When it is understood that their Pacific Coast department alone averages more than one elevator for every day in the year, it can

readily be seen that no small amount of detail is involved.

The introduction and development of electric elevators led to the improvement of other types. The increased speeds obtained, together with improvement of the safety features, resulted in New York City in what is undoubtedly the most remarkable change which has ever come about in any city in a like number of years. A glance at a photograph of the lower part of Manhattan Island taken in 1876 shows the present postoffice building looming up in such proportions as to dwarf everything else in sight, excepting the Tribune Building, and Trinity and St. Paul church spires. A photograph taken a few weeks ago from the same point fails to disclose the post office at all, the same being completely hidden by the large surrounding buildings, while Trinity and St. Paul's are both so completely overtopped by the nearby gigantic office buildings as also to be lost to view. From four and five story buildings which were then the rule, sky-scrapers have developed with the aid of the elevator, the eighteen and twenty story buildings becoming as common as the old four story building, while the advent of the Otis Traction Elevator has made possible the forty and fifty story sky-scrapers recently completed.

The Otis Elevator Company's Pacific Coast Department headquarters are located at Stockton, North Point and Beach Streets, San Francisco, and from this point is directed the Company's business in California, Oregon, Washington, Idaho, Nevada, Arizona, Montana, Utah, Colorado, Wyoming, Alaska and Territory of Hawaii. Branch offices are maintained in Portland, Oregon; Seattle, Spokane and Tacoma, Washington; Los Angeles, Oakland, San Diego, Sacramento and Fresno, California; Salt Lake City, Utah; Boise, Idaho; Denver and Colorado Springs, Colorado, and Honolulu, T. H.

The main building of the Company's plant in San Francisco is 275 feet long by 65 feet wide and two stories high. The main floor is devoted to the metal working and electrical departments, while the second floor contains the offices and stock room. Adjoining buildings contain the wood working department, blacksmith shops and storage for castings, steel beams, lumber, etc. The plant in San Francisco, including stock, represents an investment of more than $800,000.00, with a $200,000.00 annual payroll. Most of the principal buildings in all the western cities contain Otis Elevators.

The tallest business structures in the world are equipped with Otis Elevators; among these may be noted:

Woolworth Building, New York.
Singer Building, New York.
Metropolitan Building, New York.
Whitehall Building, New York.
Hudson Terminal Building, New York.
No. 1 Wall Street, New York.
Bankers Trust Co. Building, New York.
Postal Telegraph Cable Co., New York.
Park Row Building, New York.
Fire Company's Building Corporation, N. Y.
N. Y. Telephone Company Building, New York.
Peoples Gas, Light & Coke Company, Chicago.
Republic Building, Chicago.
Blackstone Hotel, Chicago.
Hotel Sherman, Chicago.
Insurance Exchange Building, Chicago.
North American Building, Chicago.
Chicago Telephone Company, Chicago.
Marine National Bank, Buffalo.
Hamilton National Bank, Chattanooga.
Cleveland Telephone Company, Cleveland.
Statler Hotel, Cleveland.
Hollenden Hotel, Cleveland.
Adolphus Hotel, Dallas.
Daniels & Fisher, Denver.
Hotel Pontchartrain, Detroit.

WOOLWORTH BUILDING, NEW YORK CITY

This building, the tallest in the world, is equipped with 26 Otis Gearless Traction Elevators.

Two of the elevators run from the first to the fifty-first floor with actual travels of 679 feet 9½ inches and 679 feet 10¼ inches respectively. There is also a shuttle elevator which runs from the fifty-first to the fifty-fourth floor.

Total height of building from curb to base of flag staff, 785 feet.

Dime Savings Bank, Detroit.
New Rice Hotel, Houston.
Alworth Building, Duluth.
Scarritt Estate, Kansas City.
Flour & Corn Exchange, Minneapolis.
Cotton Exchange, Memphis.
First National Bank, Milwaukee.
Prudential Life Insurance Co., Newark.
First National Bank, Pittsburg.

Oliver Building, Pittsburg.
Curtis Publishing Company, Philadelphia.
Eastern Township Bank, Quebec.
First National Bank, Richmond.
Syndicate Trust Company, St. Louis.
Third National Bank, St. Louis.

Dominick Burns Building, Vancouver, B. C.
and to come nearer home:

42 story L. C. Smith Building, Seattle, Wash.
Whittell Building, San Francisco.
Humboldt Bank, San Francisco.
Whitney Building, San Francisco.
Alaska Commercial Building, San Francisco.
Metropolis Bank Building, San Francisco.
Royal Insurance Building, San Francisco.
Hearst Building, San Francisco.
Standard Oil Company Building, San Francisco.
Hobart Building, San Francisco.
Old National Bank Building, Spokane.
Corbett Building, Portland.
Yeon Building, Portland.
Northwestern Bank Building, Portland.
Los Angeles Trust & Sav. Bank, Los Angeles.
Los Angeles Investment Company, Los Angeles.
I. N. Van Nuys Building, Los Angeles.
New Rosslyn Hotel, Los Angeles.

All of these buildings are equipped with Otis 1:1 Gearless Traction Electric Elevators, and in making this list only a few representative buildings were selected, in different sections of the country. There are numerous other buildings containing this same type of equipment, and hundreds of other buildings in the sky-scraper class equipped with Otis Elevators of other types. The Otis 1:1 Gearless Traction Elevator has been selected by the world's most celebrated engineers for the world's greatest structures, due to the remarkable features of this apparatus that place it in a class by itself as regards safety, efficiency, durability, and smoothness of operation. Due to the slow moving parts of the elevator engine itself, and the massive construction of the apparatus, electrical troubles with this type of elevator are practically unknown. A corps of experienced engineers and elevator experts are in the employ of the Company, and are pleased at any time to render assistance to architects in connection with their specifications and plans.

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THE QUANTITY SYSTEM OF ESTIMATING.

(Concluded from page 135)

performed is clearly indicated by the Bill of Quantities which is the essence of the contract. Third, no expense to the bidder, the owner pays for his own quantities "knowingly," and they benefit him as well as the contractor. The owner pays now, but this fact is not emphasized or brought to his attention, and so he does not know it. The percentage added to a bidner's net cost is not all profit, a certain portion of such percentage is absorbed in costs of running his business and similar overhead charges, which ultimately are, of course, paid by the owner. Fourth, saving of disputes arising from extra claims which often occur through vagueness of drawings and omissions, or other error in specifications. Fifth, better opportunities for the careful, competent bidder. With the Quantity System the bidders all work up from the same basis. The incompetents cannot omit or forget the painting, glass or other items, and so take work away from more careful or competent bidders. Sixth, better work and more harmony will result, for the reason that if no part of the work has been omitted there will be less temptation to "let up" on the work, and which usually results in dissatisfaction, if not friction or worse. Seventh, misunderstandings reduced to a minimum. The Bill of Quantities is the "interpreter" of what is intended, a sort of clearing house for the drawings and specifications. Eighth, neither party to the contract can obtain any advantage over the other on quantity or description of work. Ninth, no disputes with subbidders, it being clearly stated what each trade is to furnish. Tenth, contractors having much less figuring to do, can then devote more time and give more attention to buildings in hand, and especially in supervising and directing their sub-contractors, which is much wanted now. Eleventh, owners and architects would be less liable to have inferior contractors as the lowest bidders. Twelfth, fewer extras. These are usually a trouble to all concerned. Should any occur, they can be easier adjusted if the schedule prices govern in such case. Thirteenth, the architect or engineer, if he so desires, can have the advantage of collaboration with the professional Quantity Surveyor, who also would be available when preliminary figures are required, which information is now so often furnished by the contractors, thereby creating an undesirable obligation. Fourteenth, no change or reorganizing of architects' or engineers' offices necessary, whilst much detail work now involved when taking figures will be taken care of by the Quantity Surveyor's office. Fifteenth, when the contracts are signed, the drawings and specifications will previously have been made as complete as it would be possible to make them, thereby avoiding subsequent inconvenience to the contractor and his foreman on the job, and doing away largely with inquiries at the architect's offices by contractors during progress of the work.

The particular system suggested for our use should be one best adapted to American needs and sentiment, a practical system, which would meet our special requirements and endorsement. Such a system has been under consideration for some years past, one that is expected to meet with general approval and adoption, at least until experience or wiser heads suggest something better. For many reasons it would be undesirable to accept the English system in either of its forms. That is to say as a "system" for general use. The great principle it stands for, however, viz.: that of giving as well as receiving a square deal, can be both accepted and used with much advantage to both owner and contractor. It suggests no haphazard or guesswork methods, which is true business and fair to all.

Now, very briefly: How can this system be adopted? It takes time, of course, to get rid of old customs or old habits, however bad they may be. But considerable progress has already been made, and the outlook all over the country favoring better methods is now certainly encouraging. At the inception of this movement, however, in 1891, it was not easy to find any one willing even to admit that betterment in estimating conditions were necessary, or even possible, and there were fewer people still who knew anything about the Quantity System. Happily, we are a progressive people, and things are not done today as they were twenty or thirty years ago. Indeed, it is now very generally recognized that estimating and certain contract conditions are about as bad as they can be. Quite recently it was stated by an experienced contractor whose opinions both deserve and command respect, that if a bidder figured to do everything just exactly

as it was called for, he would not get one job in fifty, and the reasons why are well known to those in the business.

After once the principle and the safety of the Quantity System is understood (and the words "Safety first" should become a national slogan), after its many advantages are recognized, its equity between owner and contractor becomes immediately manifest.

To adopt the system generally the organization referred to hereafter advocates that the United States Government and every state and county in the Union should furnish, free of cost, to every bidder detailed Bills of Quantities, setting forth clearly and squarely exactly what quantity and nature of work it is that a bidder will, if successful, be required to perform in order to properly complete the contract. The next step, it is thought, will be that municipalities will follow the same practice. The advantages obtained will quickly become known in every locality among private owners and the building community, and the present practice, which is already tottering, will be a thing of the past, and we shall all be wondering why such a labor-saving, sensible method has hitherto been neglected in the present day, and in our generation.

Accuracy and honesty are the Quantity Surveyor's chief essentials, apart from his professional ability. It seems, therefore, that the practice of Quantity Surveying should be legalized in each state, somewhat similar to that of the public accountant, through examination and subsequent issue of licenses to persons thus qualified and wishing to practice. The furnishing of surety company's bonds by the Quantity Surveyor has been suggested in some quarters, to guarantee his accuracy and honesty, but it would seem that until a similar guarantee is demanded from other technical practitioners, the expediency and efficiency of this course may fairly be questioned.

It may be stated, perhaps, that to still further advocate the adoption of better estimating methods and more satisfactory contract conditions, an organization was formed last year known as the American Institute of Quantity Surveyors, which is doing much good work along these lines. Its membership is open to all architects, engineers, contractors and others (including owners) who are in sympathy with the efforts being made to bring about better conditions. The dues are merely nominal, including the official bulletin every month, which gives the progress of this movement throughout the United States, whilst its columns are open to all for suggestions or inquiries regarding the work of the organization in general or the Quantity System in particular.

It may perhaps be only fair to add (with due modesty, however, let us hope) that to San Francisco belongs the credit of being the first city in the United States in which a systematic effort was ever made to bring about better estimating conditions such as the Quantity System affords. This movement commenced many years ago, in 1891, when in the month of April an informal address and discussion took place before members of the Builders' Association of California (now the General Contractors' Association).

Immediately following this came an address entitled "The Quantity System of Estimating," in the Academy of Sciences Building, before the San Francisco Chapter of the American Institute of Architects. Much interest having been aroused, no opportunity was afterwards lost of sustaining it. Articles were contributed to architectural and building journals in the East and elsewhere. "Better Estimating Methods" was the slogan consistently urged for years. In 1905 a paper on this subject was given and discussed before the Technical Society of the Pacific Coast. The conflagration in 1906 somewhat disturbed the progress of the work temporarily, but it was soon resumed and brought once again to the front. It has since grown until now the movement has spread from the Pacific to the Atlantic, and from Boston to New Orleans. Everywhere today the subject is being received by engineers and contractors, as well as by architects, with the greatest interest. I can testify as to this, having but recently completed a tour of some 14,500 miles undertaken solely for the purpose of meeting the leading architects, contractors and engineers of our large cities and of personally still further advocating higher contract ideals and better methods, such as always follow the adoption of the Quantity System of Estimating.

Editorial Note.

The Quantity System of Estimating has been systematically advocated since 1891. From time to time it has attracted much attention among contractors, architects and engineers as a direct result of Mr. Wright's long continued and well known activity with the subject. In course of time this system of estimating must be adopted, as it always stands for a square deal between owner and contractor, which is much to be desired. The movement in aid of this work is purely a voluntary one, an honest effort to bring about a betterment of existing estimating and contract conditions and which when consummated will be a boon to all concerned, including the owner.

Those of our readers who are in sympathy with this work, or who desire information concerning the system, or who may be willing to participate in the good work, are cordially invited to communicate with Mr. Wright personally at 571 California Street, San Francisco, California.

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Trade Notes

The Hoffman Heater Co. maintain their own office in San Francisco at 397 Sutter St.

Architect Elmore R. Jeffery has returned from a trip to San Francisco, where he spent several days on business and pleasure.

William B. Noe, Jr., architectural designer, formerly of the firm of Noe & Spencer, has opened office at 127 Coulter building, Los Angeles.

Architect Normand W. Mohr has moved his office from the Bankers Investment building to Room 829 Examiner building, San Francisco.

Mr. Watson E. Reid, Portland representative of Reid Bros., architects, 603 Yeon building, Portland, Ore., has recently made a trip to Los Angeles on business for the firm.

State certificates were granted this week by the Board of Architecture to Charles M. Hutchison, 1405 Hibernian building, Los Angeles, and to John B. Hawley, Register building, Santa Ana.

The Panama-Pacific Exposition has approved the adoption of the Hoffman Heater in all buildings for the Exposition Company. This recognizes them as the official heater of the Exposition.

Architect Julian L. Everett has moved from the Walker building to Room 400 Boston block, and occupies offices jointly with W. R. B. Willcox, who was formerly of the firm of Willcox & Sayward.

Architect Frederick H. Eley of Santa Ana and John B. Hawley, who has been connected with the office for nearly two years, have formed a partnership. Mr. Hawley was recently granted a certificate to practice architecture.

Henry Bacon, one of the leading architects of New York, is now on his way to San Francisco to superintend the finishing of the great Court of the Four Seasons, which will be the first of the five courts to be completed.

Charles H. Bebb, F. A. I. A., and Carl F. Gould, A. A. I. A., have formed an association for the general practice of architecture, with offices in the Denny building, Seattle, where Mr. Bebb has been located for a number of years.

Architect C. O. Clausen, formerly located in the Phelan building, has found it necessary owing to his increased business to secure larger quarters, and has taken three large rooms, 722, 723 and 724 Hearst building. These offices are now open to his clients.

Octavius Morgan, senior member of Morgan, Walls & Morgan, architects, has returned from Europe and is now visiting eastern cities.. Mr. Morgan attended a meeting of the board of directors of the A. I. A., of which he is a member, at Washington, D. C., on May 15.

Mr. B. F. Turnbull, architect, Everett, Wash., is supervising the erection of the $35,000 high school at Marysville, Wash., for which he prepared the plans. Mr. Turnbull is also supervising the erection of a brick building at Monroe, Wash., for A. B. Spraw, for which he also drew plans.

Architect Francis W. Grant, Globe block, Seattle, Wash., has just been commissioned by the county commissioners of Clallam County to prepare the plans for the construction of a $50,000 court house at Port Angeles, Wash. The building will be two stories and of brick and terra cotta construction.

W. R. B. Willcox, F. A. I. A., and of the firm of Willcox & Sayward, 400 Boston block, Seattle, left May 9th, 1914, to attend a meeting of the board of directors in Washington, D. C., of which he is a member. During his absence he will visit Burlington, Vermont, where he has some work under way.

W. B. Thuman, president of the Thuman Door Co. and vice-president of the Simplex Window Co., has been in San Francisco on business. Mr. Thuman reports a large business on Simplex Windows throughout the San Joaquin Valley, including all the new school houses that are to be erected in Fresno at a cost of $500,000.

Howard Frost, president of the Los Angeles Pressed Brick Co., of Los Angeles, has been in San Francisco with his superintendent, Mr. Gustave Larsen. Mr. Frost reports they are closing a number of good contracts in Southern California as well as through the United Materials Co. of San Francisco, their northern representative.

The Giant Suction Cleaner Co., Bacon building, Oakland, have a new illustrated catalogue which shows fully the vacuum cleaner installed as a compressor and vacuum cleaner combined. The piping illustration is of such character that it embodies every known fitting that can be successfully used and properly installed in a perfect working system.

The Frederick Post Co. is preparing a new issue of their catalogue which will be ready for distribution the early part of 1915. To meet immediate needs a reprint of their old catalogue is now being offered and will be sent to any architect or draftsman on request. One of the new features of the Frederick Post Co. is their new brand of tracing cloth, bearing their name, which, on account of its many excellent qualities, has already found great favor among the profession during the short time it has been on the market.

Gladding, McBean & Co. report the following contracts for terra cotta on the following buildings in Southern California: The Haas building, Morgan, Walls & Morgan, architects; the new Citizens Nat. Bank building, Parkinson & Bergstrom, architects; the Broadway Lease Hold Co. building, Mayberry & Parker, architects; all in Los Angeles. The United States postoffices in Pasadena and Santa Barbara. The recent contracts in the northern part of the state include the U. S. postoffice in Berkeley, office building for the Firemen's Fund Insurance Co., L. P. Hobart, architect, and the Cowell building, H. H. Meyers, architect, in San Francisco.

In the following circular letter addressed to their agents, the firm of W. P. Fuller Co. announce another new industry for the Pacific Coast.

"Our salesman has doubtless acquainted you with the fact that we now manufacture our own prepared wax, but possibly he has not thoroughly **convinced you of the excellent quality of this product.** We wish to assure you that we refrained from marketing Fuller Floor Wax until our laboratory tests convinced us that we had a very superior product—superior in wearing quality as well as in ease of application. It is free from objectionable odors, does not gum up when subject to pressure and does not soften when exposed to warm temperatures. The fact that this wax is supplied in net weight containers, coupled with the low price at which you can buy it, cannot fail to interest you."

Mr. J. S. Stevenson, general manager of Berry Bros., Detroit, Michigan, states that the month of April, 1914, was a record-breaker, as they received the greatest number of orders in April that they ever received in one month during the history of the firm. This is remarkable when you consider the general business depression over the United States for something like the last twelve months.

Berry Bros. are the most extensive advertisers of high-grade varnish in this country, thereby further argument to the point "Does it pay to advertise?" goods of superior merit.

Eleven of their salesmen won prizes during April. Since erecting a new building, completed in January, 1914, for the exclusive use in the manufacture of "Berrycraft" and "Luxeberry White Enamel," has already been outgrown, so that another addition is now in the process of erection after the completion of only five months ago.

CALIFORNIA

San Francisco—Architect Frederick H. Meyer, Bankers' Investment Bldg., has completed plans for the erection of a three-story and basement apartment house for Mrs. Bertha Overfeld, to be erected at the corner of Green & Fillmore Sts., at a cost of $30,000.

Architect Geo. W. Kelham, Sharon Bldg., has completed plans for the three story and basement Class A construction library for the City and County of San Francisco, to be erected in San Francisco's Civic Center at a cost of $1,000,000.

Architect Sylvain Schnaittacher, First National Bank Bldg., has completed plans for the construction of a two story Class A garage for G. P. W. Jensen at a cost of $40,000.

Architects Smith & Stewart, 244 Kearny St., have completed plans for a seven story and basement brick and steel hotel building to be on the corner of O'Farrell and Taylor Sts., and to cost $70,000.

Plans are nearly completed for the two story and basement Class C construction church for the Christian Science Church, by Architect Wm. H. Crim, Jr., at a cost of $50,000.

Architect A. F. Heide, 46 Kearny St., is completing plans for the construction of a two story frame and plaster State Exhibit Building for the State of Washington, at a cost of $60,000.

Plans have been completed by Architect Houghton Sawyer, Shreve Bldg., for the construction of a two story and basement reinforced concrete school building at a cost of $110,000.

Alturus, Cal.—Plans are now being revised for the construction of a court house dome and basement of reinforced concrete for Modoc County, by Architect F. J. DeLongchamps, Reno, Nev., at a cost of $90,000.

Sacramento, Cal.—Architects Shea & Lofquist, Bankers' Inv. Bldg., San Francisco, have completed plans for a two story and basement school building for the city of Sacramento at a cost of $200,000.

Chico, Cal.—Architect A. J. Bryan, Chico, has prepared plans for a two story and basement brick school building for the Oakdale School District at a cost of $50,000.

Riverside—Architect J. W. Carroll has prepared plans and will build a new theater building for George Frost at a cost of $75,000.

San Bernardino—Architect Norman F. Marsh, 214 Broadway Central Bldg., Los Angeles, is preparing preliminary plans for the new polytechnic high school at San Bernardino. There will be a group of six buildings and it will cost about $210,000.

The same architect is preparing plans for three buildings for the Alhambra high school at a cost of $100,000.

San Diego, Cal.—Architect D. H. Holmes is drawing plans for a large business building for the block bounded by 15th, 16th, Broadway and C Sts., for B. F. Murtha. It will cost approximately $75,000.

Los Angeles, Cal.—Architects Frederick Noonan and Wm. Richards, 609 Brockman Bldg., have been commissioned to prepare plans for a reinforced concrete department store building to be erected on the old postoffice site at 7th and Grand Ave., for J. W. Robinson Co., at a cost of $750,000.

Architects Dennis & Hewitt, 618 Fay Bldg., have prepared plans for a two-story brick flat building to be erected at 1628 Hudson St., Hollywood, for O. P. Dennis.

Architects Parkinson & Bergstrom, Security Bldg., are now taking bids for the erection of a seven-story reinforced concrete bank building at Pasadena for the Citizens' Natl. Bank of that city.

The Los Angeles City has voted to issue $4,600,000 bonds for the purchase of school sites and construction of school buildings. The new buildings will be brick or concrete construction.

Architect W. J. Dodd, 321 Marsh-Strong Bldg., is completing working plans for the new school building to be erected at Beverly Hills. It will be a one-story structure, and will contain six class rooms, at a cost of $20,000.

The Milwaukee Building Co., Wright & Callender Bldg., has completed plans for a four-story Class C. brick hotel building to be erected at Ninth and Wall Sts., for E. W. Pascal, Mason Bldg., at a cost of $60,000.

WASHINGTON

Seattle—Architect John Graham, Lyon Bldg., has completed plans for a two-story and basement brick apartment house for D. R. McKay at a cost of $100,000.

Architect David Dow, 21st and Spruce Sts., Seattle, has completed plans for a five-story and basement brick and steel apartment house, for H. M. Richmond, at a cost of $60,000.

Architect A. Warren Gould, Seattle, has revised plans for a Court House group of three and five-story buildings. Class A construction, for the City of Seattle, at a cost of $950,000.

Architect Carl F. Gould, Boston Block, Seattle, is completing plans for the construction of a two-story and basement hollow tile construction residence for J. H. Blodell at a cost of $50,000.

The same architect is preparing plans for a two-story, attic and basement residence for C. X. Larabee, at a cost of $50,000, to be erected at South Bellingham, Wash.

Plans for the construction of a five-story reinforced concrete cold and warm storage plant at the foot of Bell St. were prepared by Capt. A. O. Powell, Central Bldg., at a cost of $400,000.

Architect B. Marcus Priteca, Empire Bldg., has completed plans for the construction of a six-story steel and concrete office and theater building for Alexander Pantages, at a cost of $16,000.

Sedro-Woolley—Architects Saunders & Lawton, Alaska Bldg., have completed plans for the construction of a concrete tunnel and covered walk at Sedro-Woolley to cost $35,000.

Tacoma, Wash.—Plans are being prepared for the construction of a Moose Lodge building of concrete and brick construction at a cost of $50,000.

Architects Lundberg & McMahon, Provident Bldg., are preparing plans for a $100,000 theater building, to be of concrete and tile construction.

Hoquiam, Wash.—Architects Stephen & Stephen, Seattle, Wash., are completing plans for the construction of the Hoquiam High School at a cost of $100,000. It will be completed in time for use during the next school year.

OREGON

Portland—MacNauton & Rayment, Architects, Title & Trust Bldg., have been commissioned to prepare plans and specifications for the proposed $90,000 building to be erected on the East Side for Oscar Heintz, of the Pacific Iron Works, which has been leased to the Blake-McFall Paper Co. The estimated cost is placed at $90,000.

Architects Claussen & Claussen, Macleay Bldg., have completed plans for the construction of a four-story and basement brick and steel apartment house for Mrs. C. Brown at a cost of $100,000.

Architect Aaron H. Gould, Henry Bldg., Portland, Ore., have completed plans for the construction of a two-story and basement Class A theater, to be erected at the corner of Park and Stark Sts. at a cost of $100,000.

Astoria, Ore.—Architects Whitehouse & Fouilhoux, Wilcox Bldg., Portland, have completed plans for the construction of school alterations and additions at a cost of $20,000.

McMinnville, Ore.—Architects Jacoberger & Smith, Board of Trade Bldg., Portland, have completed plans for the construction of a hollow tile church for the Roman Catholic Church of McMinnville at a cost of $25,000.

Architect Ernest Kroner, Worcester Bldg., Portland, was selected to prepare plans for the proposed school building to be erected this summer for the city of McMinnville at a cost of $30,000.

Klamath Falls, Ore.—Architects Veghte & Co. have prepared plans for the construction of a municipal building for the city of Klamath Falls.

The Dalles, Ore.—Architect C. J. Grandall has completed plans for the construction of a three-story and basement brick school for the city of Dalles at a cost of $100,000.

Silverton, Ore.—Architects Tourtellotte & Hummel, Rothchild Bldg., Portland, are preparing plans for a four-story and basement brick lodge hall for the Masonic Hall Assn. of Silverton at a cost of $20,000.

MISCELLANEOUS

Vancouver, B. C.—Plans have been prepared by Architect R. Mackay Fripp, Hutchison Bldg., for a two story frame residence. It will cost $6,000 and the work will be let under one general contract.

Plans are being prepared for the proposed new Strathcona School Bldg., to be composed of 24 rooms, three stories, and to cost $100,000. It is to be of reinforced concrete.

Prince Rupert, B. C.—Plans for the Prince Rupert Postoffice have been approved at Ottawa, and this will be of reinforced concrete, five stories, and to cost $250,000.

Architects Mitton & Gillingham, 413 Granville St., have prepared plans for an eight story reinforced concrete hotel to cost $150,000.

Architect Jesse M. Warren, Victoria, is completing plans for the remodeling of the Harris Block, at 10th and McPherson Sts., to cost $20,000.

Architects Honeyman & Curtis, 821 Pender W., are completing plans for a seven story reinforced concrete and brick hotel building to be erected on Main St., adjoining and possibly taking in the present Blackburn Hotel site, to cost $100,000.

Fort George, B. C.—Plans have been prepared by Architect Herbert Peyton for a four story fireproof hotel at Fort George, to cost $125,000.

Kingman, Ariz.—Architects Lescher & Kibbey, 400 Bank of Arizona Bldg., Phoenix, have prepared plans for a courthouse to be erected at this place at a cost of $65,000.

Tucson, Ariz.—The Board of Regents of the University of Arizona at Tucson have eliminated all except two of the plans submitted in competition for the $150,000 agricultural building to be erected at Tucson. The choice now lies between plans submitted by William Richards of the firm of Noonan & Richards, Brockman Bldg., Los Angeles, and Bristow & Lyman of San Diego. The board expects to reach a final decision at its next meeting which will be held on Monday.

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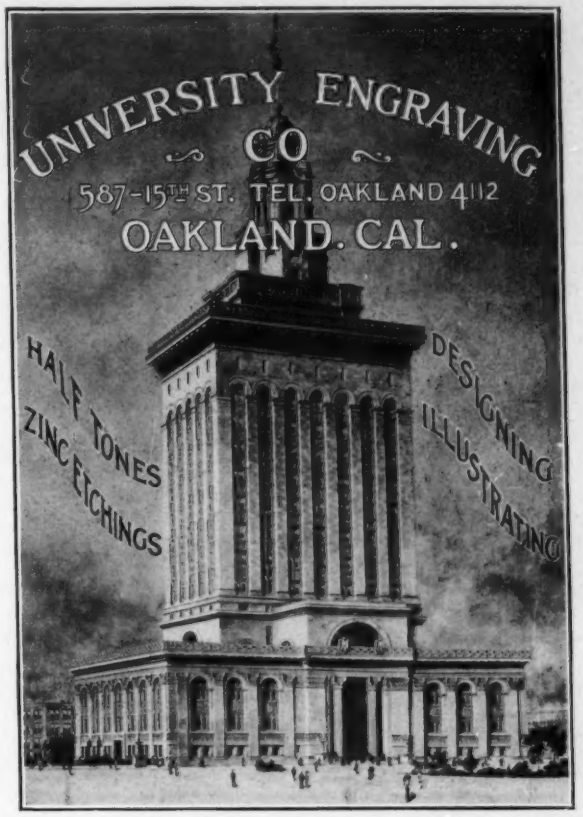

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